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SHANGHAI - MANILA

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June, 1915.

The Question of Outer Mongolia

The New Sino=Russo=Mongolian Treaty

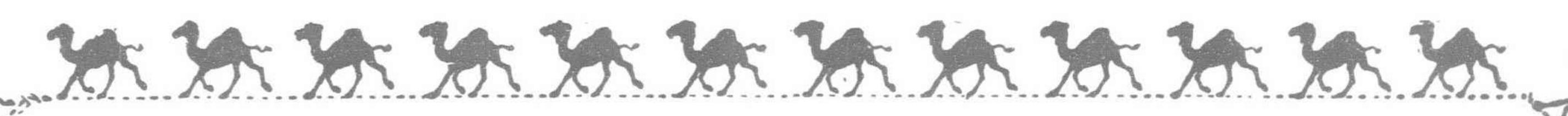
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TABLE OF CONTENTS ON PAGE 20

CLASSIFIED INDEX OF ADVERTISERS ON PAGE 38



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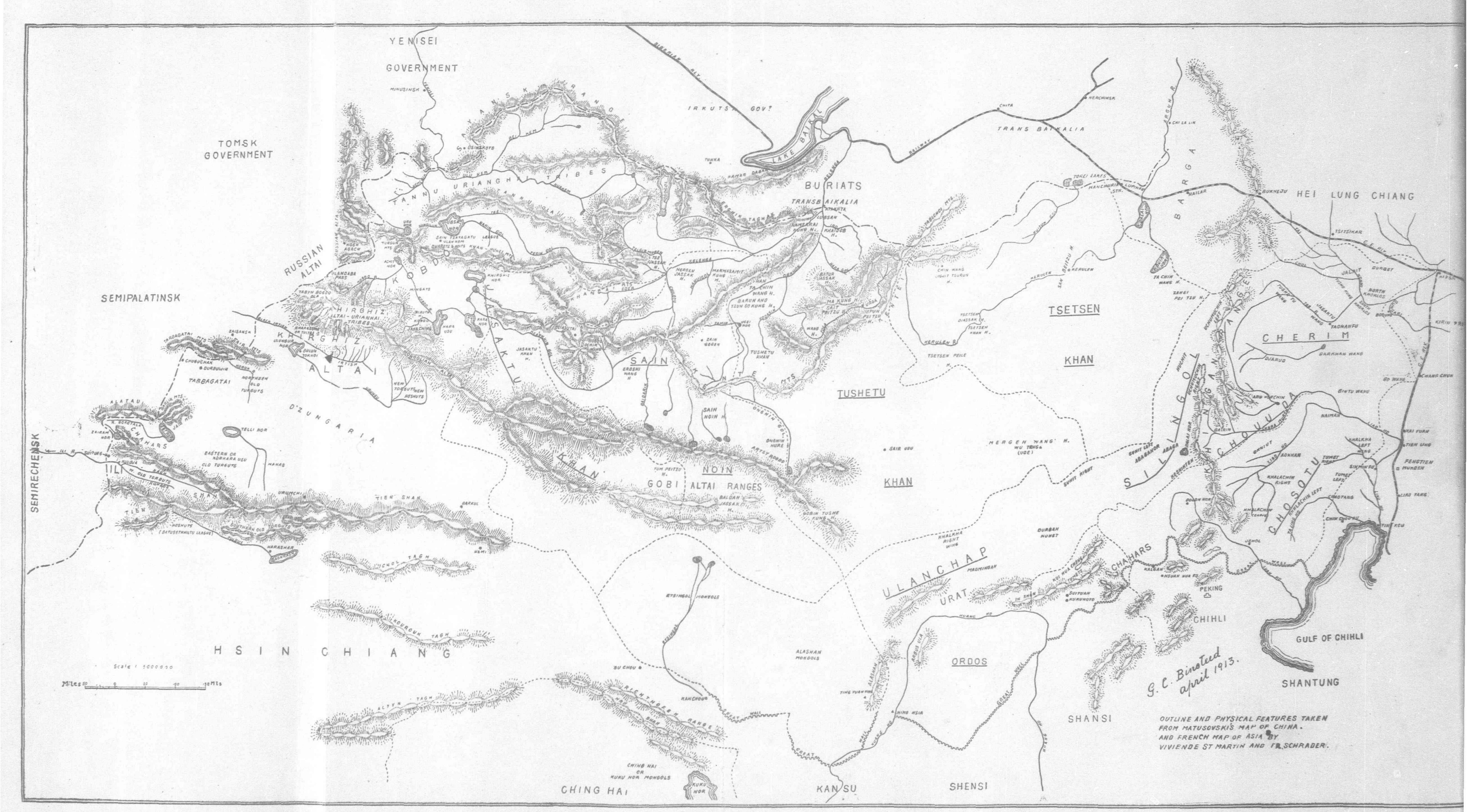
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MAP OF MONGOLIA PREPARED BY THE LATE LIEUTENANT G. C. BINSTEED, D. S. O., TO SHOW AREAS OCCUPIED BY THE VARIOUS KHANATES.

VOL. XII.

SHANGHAI, JUNE, 1915

No. 1

THE QUESTION OF OUTER MONGOLIA

(BY THE LATE W. W. ROCKHILL, FORMERLY AMERICAN MINISTER TO CHINA.)

The reversal of Russian policy which followed the termination of the war with Japan was caused, not only by a realization of that country's military power, but also by the manifest signs that China was adopting a forward policy and that her successful assertion of her rights of sovereignty over her outlying dependencies, Mongolia and Tibet, and her possible ulterior political union with Japan, would expose the sparsely peopled and very imperfectly developed far-eastern provinces of the Russian Empire to the pacific encroachments and their possible ultimate economic subjugation by the yellow races—the Jews of the East.

Henceforth the dominant idea of Russian policy became the salvation at all costs, of the provinces east of the Baikal from the yellow peril, and the building up in them of a strong, homogenious Slav bulwark, which could successfully resist its insidious attacks.

In order to attain this end and to rid herself of this obsession, Russia has not hesitated within the last few years to sacrifice substantial interests, and to pour out vast sums of money in the maintenance of her position in her far eastern provinces and Northern Manchuria. She has concluded a series of conventions and agreements with Japan conceding her various valuable rights, and gaining only, in return, a sense of greater security for the future. She has seriously retarded the development of the Pri-Amur provinces, into which Russian emigrants come reluctantly at best, by the passage of laws against yellow labor, and has discriminated against Northern Manchurian trade generally, but her efforts to increase thereby Russian colonization, agricultural development and the supply of white labor in these regions, have had but the smallest modicum of success. Finally, she has been led to adopt a forward policy in Northern Mongolia and to attempt to create there a buffer state, in the hope of arresting in that direction the peaceful penetration of the dreaded Chinese.

Russia's action in Mongolia is without doubt purely defensive; begun with hesitation it has been followed with some misgivings, but in all its stages it has been, as I hope to show in this paper, in perfect conformity with the general policy in Eastern Asia pursued for the last six years, and which is based on the profound and general belief among all classes in the yellow peril.

The historical and political side of the question of Outer Mongolia is briefly as follows: In the latter part of the 14th century the Khalka Mongols, driven from Southern Mongolia by the first Emperor of the Ming Dynasty, took up the country which they now occupy, and which lies south of Siberia, from Kobdo on the west to near Hei-lung-chiang on the east. They led an independent existence until the latter part of the 17th century, when a war broke out between them and their powerful neighbors, the Celöt Mongols, in which they were defeated and driven to seek the aid of the Chinese. The great K'ang-hsi was

then on the throne of China. In 1691 he called a great durbar of the Khalkas at Dolon-nor in southeastern Mongolia, and there the Princes of Outer Mongolia gave in their submission to China, and accepted vassalage. Very recent Russian writers have asserted that on this occasion the Khalkas only accepted Chinese suzerainty on three conditions: (1) that their country should not be colonized by Chinese, (2) that no Chinese troops should be stationed within it, and (3) that their internal organization and customs should be respected. I have not been able after careful search to find any contemporary Chinese or foreign document which bears out this assertion, and I am inclined to doubt its accuracy. Du Ralde (Déscription IV, 53) quoting presumably from the writings of Father Gérbillon, who was present at the great durbar of 1691, says: "And so this war (with the Celöts) was ended to the glory of the Emperor, who has become the absolute Master of the whole Empire of the Khalkas and of the Eluths, and has extended his dominion in Tartary to the confines of the Moscovites, which are for the most part bare and uninhabited forests and mountains." The Khalkas have, however, claimed, at least in the preamble to the Urga Convention, if in no other official document, that the recent violation by China of these terms was the principal cause of their secession.

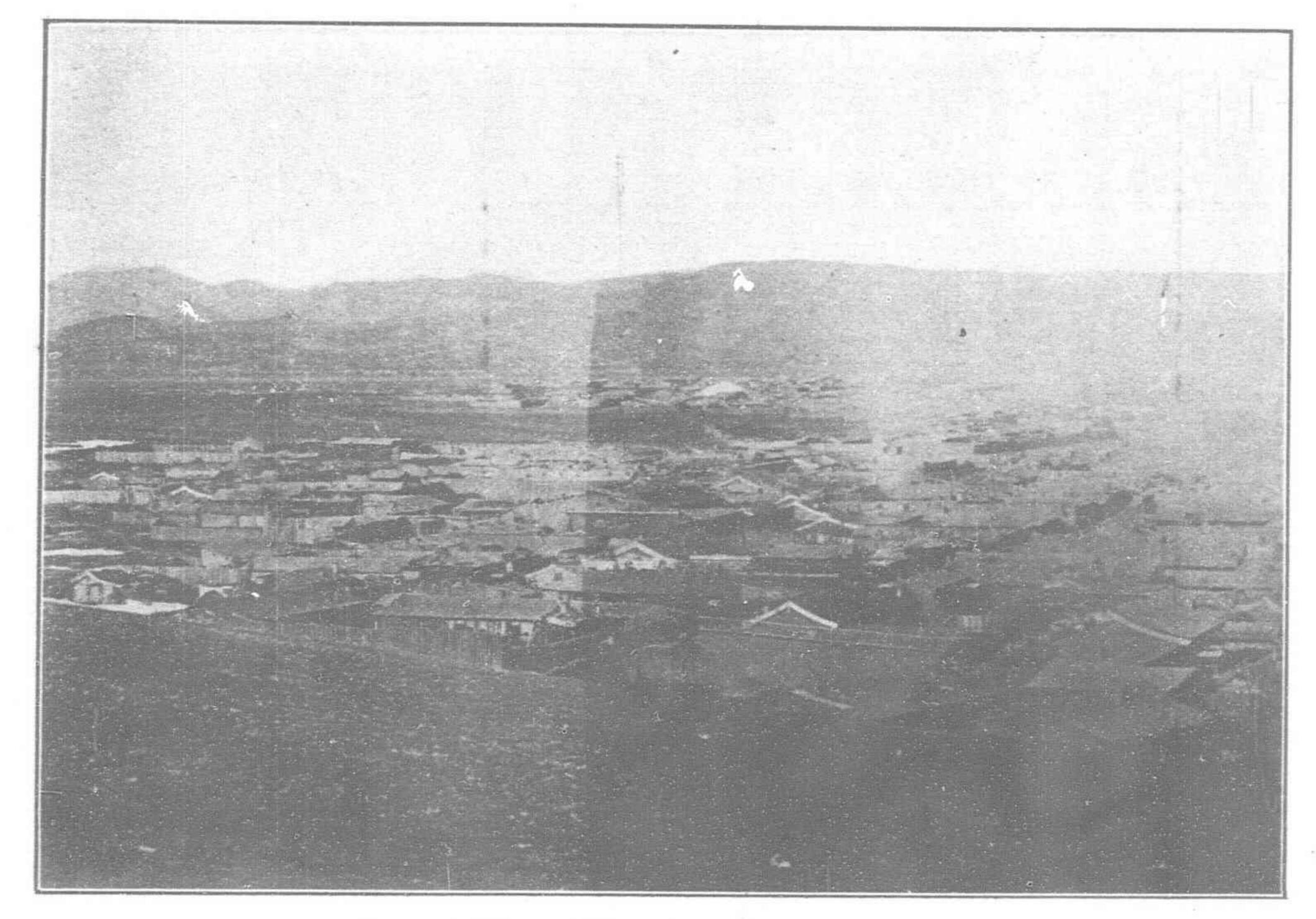
One of the principal instigators, if not the chief one, of this unfortunate war was a Mongol Lama, the brother of one of the most powerful princes of the Khalkas. He had been appointed by the Talai Lama of Tibet, the head of the Buddhist church in Outer Mongolia, and he bore the title of Jebtsunt-damba Hutuketu. Shortly after his installation in 1650 he sought to create a schism in the church, and he had himself recognized as temporal ruler of the country. He was the first of the line of theocrats, all bearing the same title as he, which has since then practically ruled over the Confederation of Khalka Tribes.

In the middle of the 18th century the then Hutuketu established his permanent residence at the foot of a sacred mountain called the Bogdo ula, which may be the burial place of Genghis Khan, and along the base of which flows the Tula River, an affluent of the Selenga. Near by a lamasery called Gadan was founded, and around it grew up the present town of Urga, Iké Kuré or Ta Ku-lun, as it is variously called, and which remains the only "city" of Outer Mongolia, though it ill deserves the name, notwithstanding its 30,000 odd inhabitants, of whom probably a third are lamas.

The first Hutuketu dying in 1724 was succeeded by another Mongol, but as he continued the separatist intrigues of his predecessor, causing thereby internal dissensions, the Chinese Government decided in 1754 that the secular affairs of the country should be managed by a body of laymen, over which shortly after a Mongol Governor was appointed as President. In 1757 the second Hutuketu dying, it was decided by China that his successor

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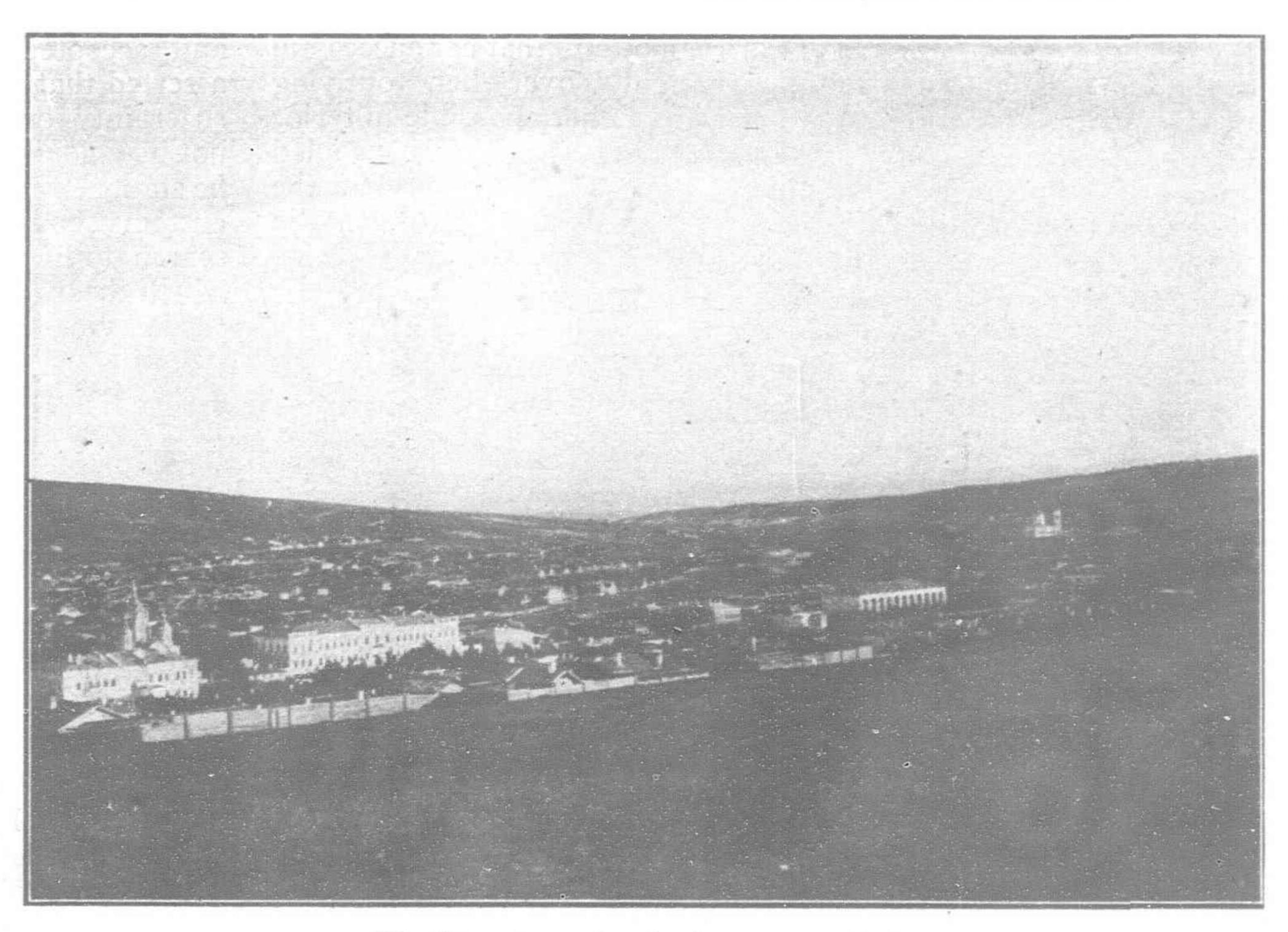
General View of Urga, Mongolia's Metropolis



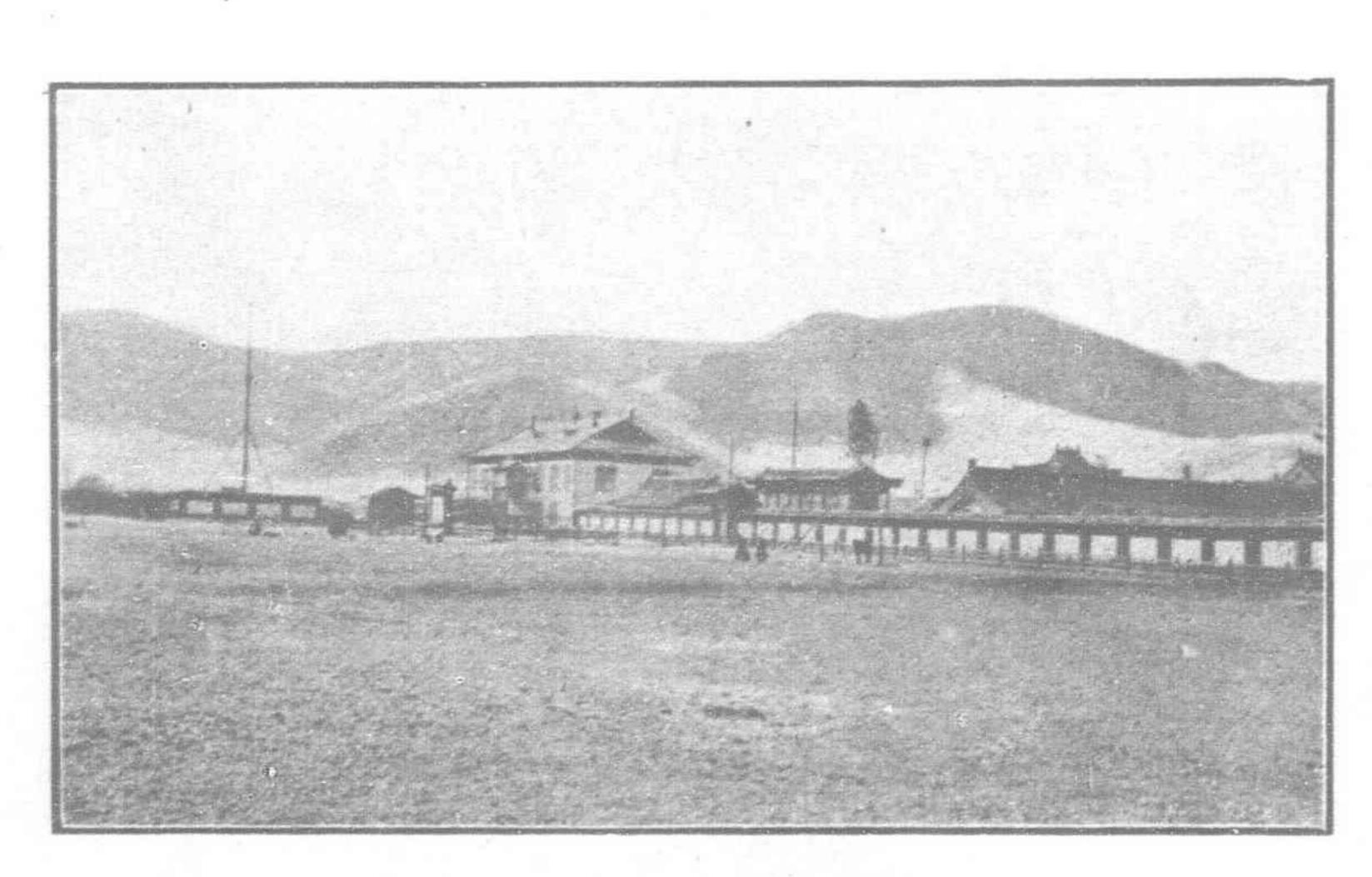
One of Mongolia's Grand Lamas



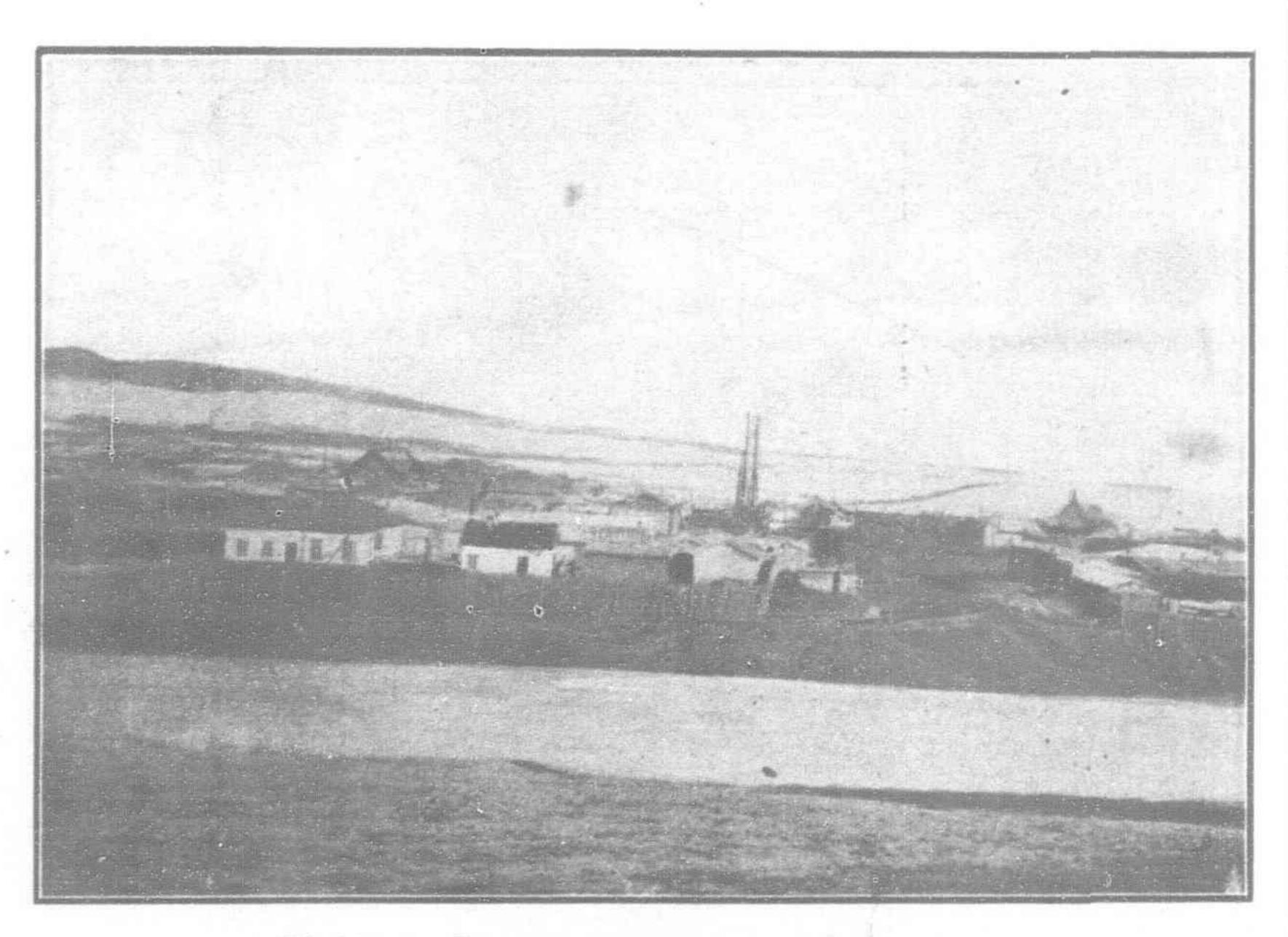
Bogdo Kahn, the Hutuketu



Kiakhta, where the Conference was Held



Residence of Bogdo Kahn at Urga



Kiakhta's Commercial Quarter-Maimaicheng

should be a Tibetan, whose appointment should be confirmed by Peking, and, further to insure the submission of the Khalka tribes, a Manchu Resident or Ambam, with a small escort, was sent to Urga in 1761, and a Tartar General to Uliassutai. Such has been substantially, till the year 1912, the organization of Outer Mongolia; the 86 Khoshun or "Banners" forming the four Aimak or "Tribes" of the Khalkas, enjoyed practically autonomous government, subject only to certain light charges and to minor restrictions on their general liberty of government, and without the presence of any Chinese troops within their confines, though Chinese traders and farmers have probably always been welcomed among them; at all events they have never been molested.

Shortly after the Khalkas took up their abode in the region confining on Siberia, the Russians entered into trade relations with them, first from the town of Selenginsk, which was founded in 1666, and later on (from 1727) from Kiahkta on the frontier between the two countries.

It was only in 1860, however, that Russia obtained by the Treaty of Peking (Article V) the right to establish a consulate at Urga, and that Kalgan, on the southern border of Mongolia, was opened to her trade. Shortly after, the present Russian consulate was built to the east of Urga, between it and the Chinese trading town called Mai-mai-cheng, and a Russian Buriat Mongol, Shishmarew by name, was appointed to fill the post. This he did for nearly fifty years, his successor having only been appointed in or about 1908.

In 1869 Russia and China signed a further convention at Peking for the land trade between the two countries. Article I provided for a free trade zone of a hundred li (30 miles) in the two countries along the whole of their frontiers, while Article II stated that "Russian merchants shall be at liberty to proceed to all parts of Mongolia—for the purposes of trade, and shall likewise be exempt from the levy of duty." This franchise (the Chinese always sought to limit it) accorded to Russian trade in Mongolia was re-affirmed in 1881 in the Treaty of St. Petersburg, Article XII, with the proviso, however, that "this immunity shall cease when the development of trade shall necessitate the fixing of a customs tariff, after agreement between the two Governments."

Article XV of the same treaty provided for a decennial revision of this instrument if one of the contracting parties gave notice six months before the expiry of the term, so in 1910 Russia gave notice to China of her desire to negotiate a revision, in the hope of securing a further extension of the free trade enjoyed by her in Mongolia, which alone enabled her traders to compete there with the Chinese. The Chinese Government was then in the full flush of their "rights recovery policy," and intent on nothing less than the absorption of Mongolia, the New Dominion and Tibet, and their transformation into ordinary provinces of the Empire, with the consequent establishment of Chinese administration, an influx of Chinese immigration and (in the case of Mongolia) its occupation by the military forces of the Empire, with, of course, the application of the general customs tariff, in which measures Russia saw great peril to her thinly populated border lands and the destruction of her trade.

The establishment of a considerable Chinese military force at Sharasumé on the Russian frontier west of Kobdo, coupled with the impolitic activity of the Urga Amban, San Toa, who began erecting barracks for troops, taking steps to enrol the Mongols, browbeating the Hutuketu, the princes and the people, and otherwise showing the lamentable lack of tact and discretion which is a marked feature of the "Young China" reformer, all this confirmed the Russians in their apprehension of Chinese aggression along the whole line of their frontier. The dilatoriness of Peking in replying to Russia's request for treaty revision was an additional source of irritation to the Government of St. Petersburg, and so in the winter of 1910-1911 a small body of troops was concentrated at Semipalatinsk to counteract the presence of the Chinese at Shara-sumé, and, shortly after, in March, 1911, a peremptory demand was sent to Peking asking the confirmation of Russia's rights under the Treaty of 1881. To this China made no definite reply and the matter remained in suspense while unrest grew in Outer Mongolia. Provoked by San Toa's stupidity, by the

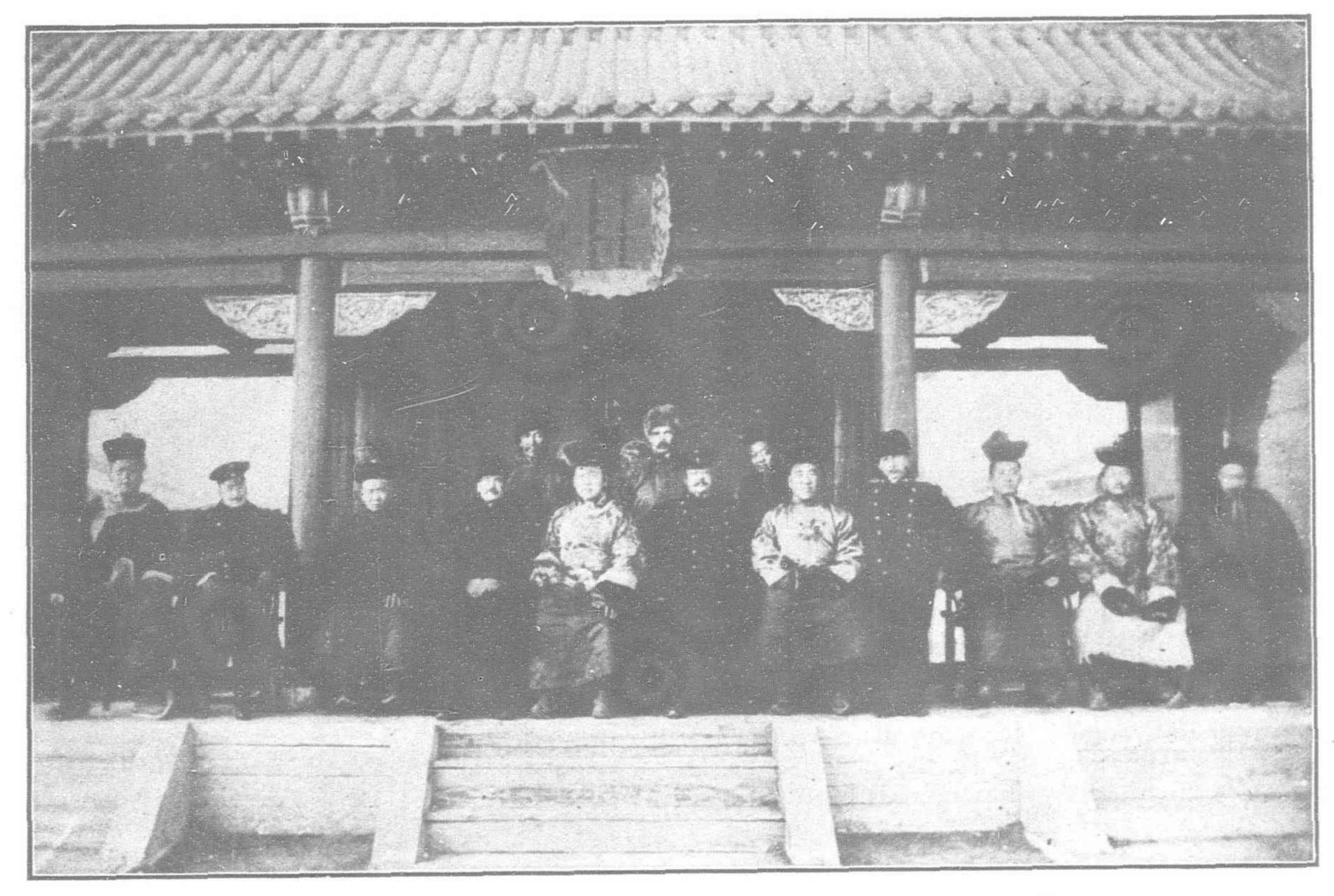
rising revolution against the Manchus, and undoubtedly relying on eventual Russian support as Russia had so frequently of late years announced her "special interest" in Mongolia, the Khalkas on the fall of the Manchu Dynasty, expelled the Amban and on December 29th, 1911, declared the severance of all political ties with China, and chose as their ruler the present profligate Jebtsun-damba Hutuketu, the eighth successor of him who had brought about the subjecting of the Khatlka so the Manchu rule.

There can be but little doubt that the Russians must have viewed with real satisfaction the secession of Outer Mongolia, for it supplied them the means of preventing further Chinese pressure on their borders and of permanently securing the trade privileges they claimed under the Treaty of 1881 while running little danger of embroiling themselves seriously with China, with whom they desired to remain, if possible, on the best of terms.

It cannot be denied that the Mongols had good grounds for wishing to put an end to their political relations with China. Their oppression by the officials sent among them was notorious, and it has been acknowledged by the present government of China. The charge of official malfeasance could not be more strongly put than by Yuan Shih-k'ai in his Proclamation to the Mongols and Tibetans of March 26th, 1912. "In recent years," he says, "the high officials sent to these border lands have been worthless, all have been most overbearing, there has not been a single one who has endeavored to put an end to the deception and cruel oppression practiced on these people. So hostility to China has been aroused everywhere and discontent has grown general. A source of deep sorrow indeed."

There appears good reason for believing that when the idea of secession was made known to the Russian Government by the unofficial mission which came to St. Petersburg in the summer of 1911, very little encouragement was actually given it at the Foreign Office and, though the then Russian Minister at Peking, Mr. Korostowetz, professed the most friendly feelings for the Mongols whom he thought should be helped, and so advised his Government, the Foreign Minister only tendered the mission his unofficial good offices with China. But immediately after the Mongol Declaration of Independence, the Russian Government announced that the Mongols held (1) that the establishment of Chinese administration in Mongolia, (2) the presence of Chinese troops, and (3) the colonization of Mongol territory, were incompatible with their rights, and that in view of Russia's large interests in Mongolia she could not ignore the de facto government, and that they would enter into business relations with them. Furthermore the Russian Government advised Peking that, subject to a recognition of these fundamental rights by China, Russia was willing to act as mediator between it and Mongolia to bring about an agreement between them. No reply having been received from China, Russia decided, some months later, upon independent action.

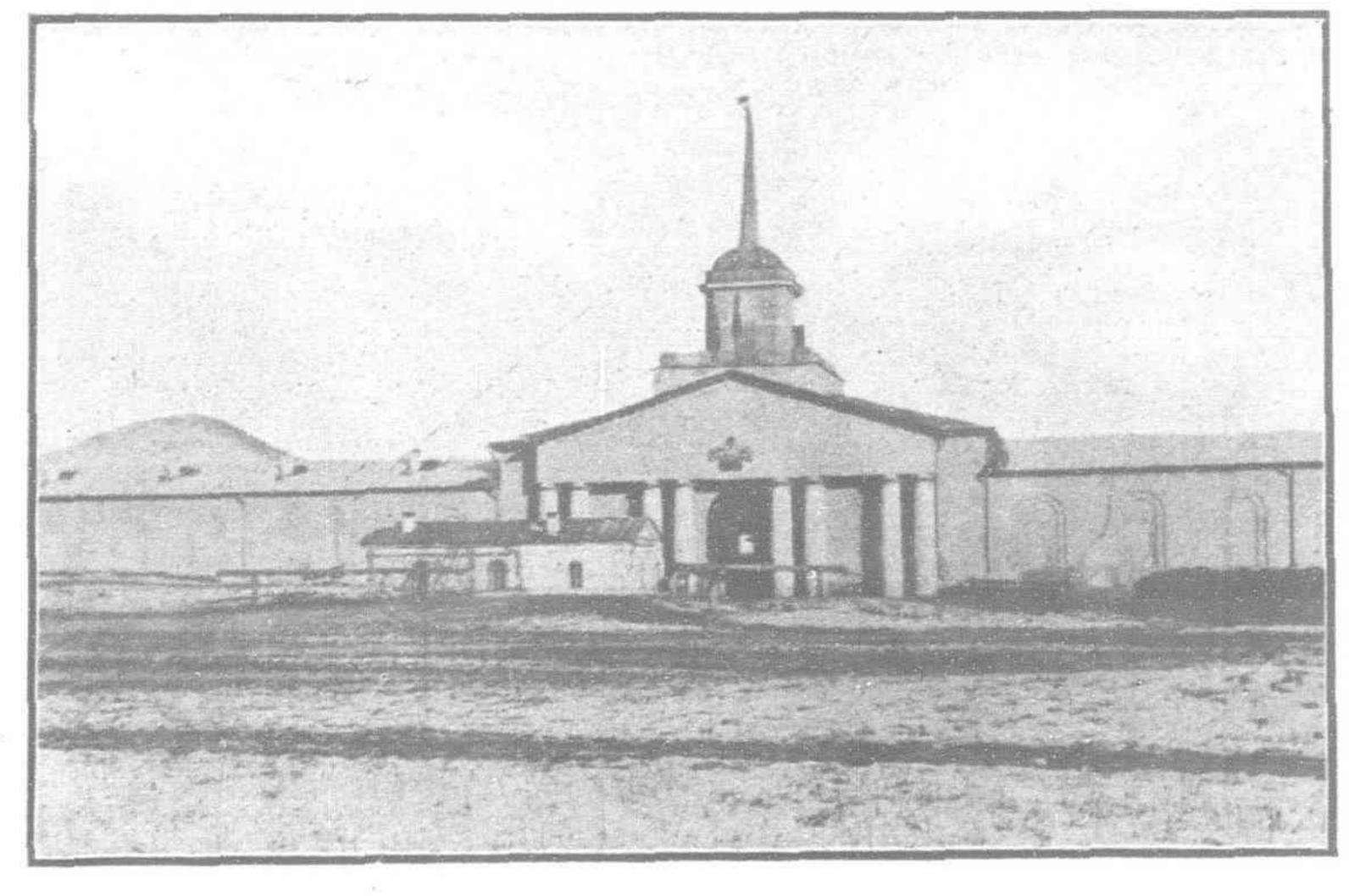
In the early part of 1912 the Mongols, replying to Yuan Shih-k'ai's Proclamation of March 26th, refused to participate in the establishment of a republican form of government in China; the Russian Government then concluded that the time had come when it could not only secure from the new state the commercial privileges in Mongolia which it had been seeking from China, but also, while maintaining its friendly position toward that country, raise up in Outer Mongolia the barrier against the yellow peril which it looked upon as of such vital importance to the security of its southern frontier. So a convention with the Khalkas embodying these essential principles of Russian policy was determined upon and in the autumn of 1911 Mr. Korostewetz was appointed Diplomatic Agent to Outer Mongolia and arrived at Urga to put through the negotiations. He met with considerable difficulty and had to use pressure and make various promises to attain his end, for the Mongol princes were divided in opinion; Russia wished to confine the new state to Outer Mongolia, whereas many of them wished the new Mongolia defined on purely racial lines. Again Russia limited her friendly offices to assisting the Mongols to maintain, not an independent state, but simply an autonomous regime. The principal opponent of the treaty was the very intelligent and influential Ta Lama, Tsérin-djigmed, Minister of the Interior, who was inclined to seek an arrangement with China, as more



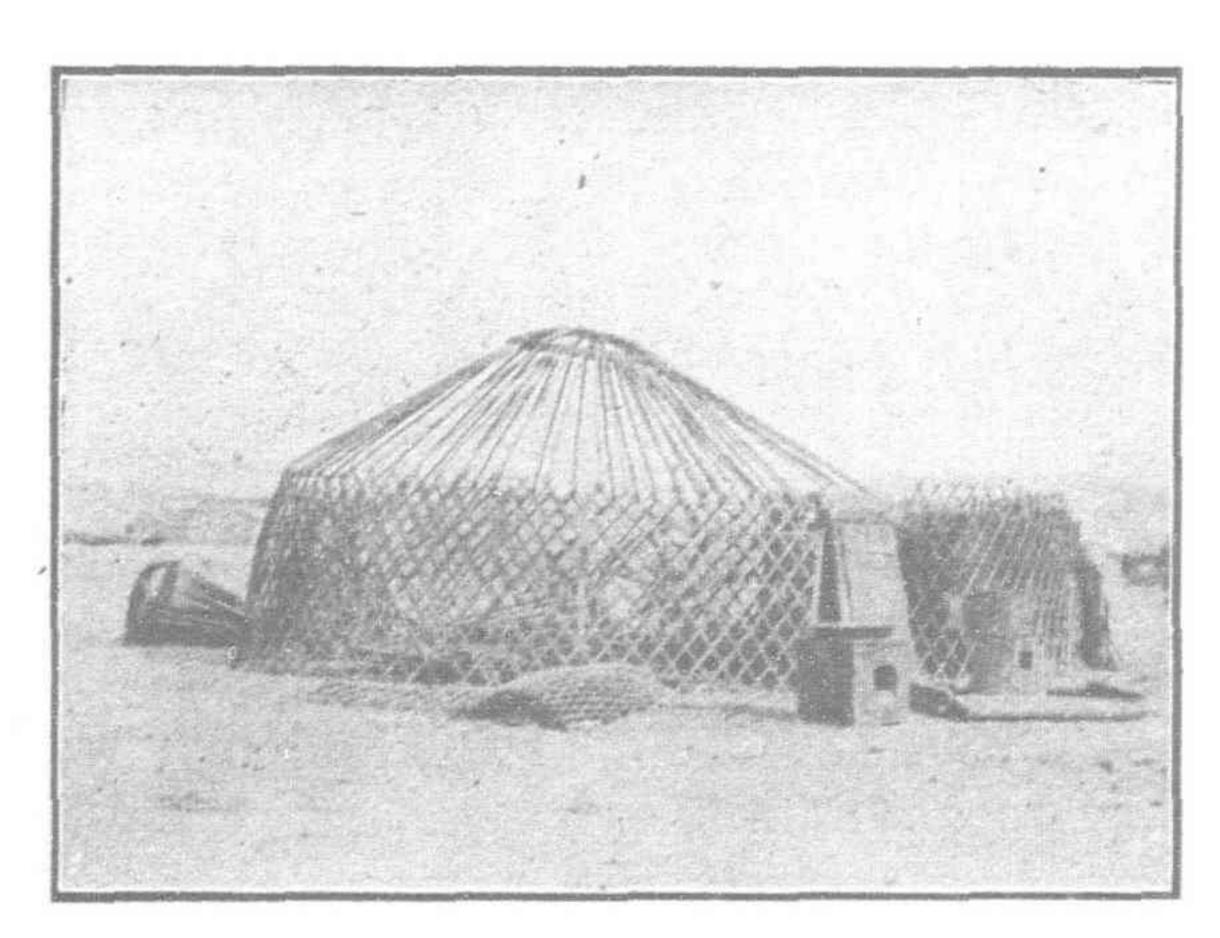
Group of Russian and Mongolian Officials who Negotiated the Former Treaty



Mongolian Nomad's Yurt or Tent



Customs Station at Kiakhta



Yurt Ready for Cover of Skins



Mongol Settler's House

likely to prove ultimately beneficial to the Khalkas, but the convention, notwithstanding his opposition, was promptly pushed through, and signed on November 3rd, 1912, coming into force on the same day. The Urga Convention, with its annexed Protocol, is short and to the point; in consideration of Russia "lending her assistance to Mongolia in preserving the autonomous regime it has established, as well as the right to have her national army and to admit neither the presence of Chinese troops on her territory nor the colonization of her land by Chinese," the Mongols concede to the Russians the most complete freedom of trade (but no right of monopoly) "in every kind of product of the soil and industry in Russia, Mongolia and China." They further promise them the most favored nation treatment and give them the right to control any treaty arrangements they may wish to enter into later "with the Chinese or another foreign power" and which may infringe or modify this conven-

The Urga Convention was received in China with howls of disapproval from the noisy "extremist" politicians then forming the majority of the Parliament in Peking, who clamored for war with Mongolia and if need be with Russia, as the only proper reply. Russia persisted in asking China to recognize autonomous Mongolia, using the identical terms first stated by her a year previously, though, considering the provision of the Urga Convention which gives Russia the right of control over Outer Mongolia's treaty relations, the offer of a recognition of the suzerainty of China over it appears utterly meaningless. It was only on November 3rd, 1913, after protracted discussion and some indirect pressure on the part of the Russian Minister, Mr. Krupensky, that he signed with the Chinese Minister of Foreign Affairs, a Declaration, by which Russia recognized Chinese suzerainty over Outer Mongolia, while China recognized its autonomy, its exclusive right to settle all questions of a commercial and industrial nature concerning it; Russia pledging herself likewise to send no troops to Mongolia beyond consular guards, nor to intervene in the administration of the country and not to colonize it.

The right to send a Chinese "Dignitary" with an escort to reside at Urga "in case of need," and agents to certain localities in Mongolia for the protection of Chinese interests and subjects was also recognized. Finally, China accepted Russian mediation to establish relations with Outer Mongolia in conformity with the provisions of the Urga Convention. Notes exchanged on the same day by the signatories of the Declaration stated that as to questions of a political and territorial nature affecting Outer Mongolia, the signatory powers would enter into negotiations in which the authorities of Outer Mongolia would take part, and it was further stated that autonomous Outer Mongolia included the territories previously under the Ambans at Urga and Kobdo, and the Tartar General at Uliassutai, the limits of these territories to be settled in the negotiations a trois previously agreed to. And so once again China bowed to the inevitable.

The majority of the princes and other chiefs of the Khalkas being strong "nationalists," in favor of the complete independence of their country, it was but natural that the Peking Declaration should be viewed at Urga with open displeasure. When I was there in December of 1913 some of the Mongol Ministers frankly declared that negotiated as it had been over their heads, they absolutely repudiated it. If a remnant of Chinese authority remained they thought it was but a question of time before they would again be under actual Chinese control. For them there were but two alternatives, absolute independence or annexation to Russia,—the latter solution, they said, they liked as little as Chinese suzerainty. To this the Russians replied that the Mongols would take a share on a footing of perfect equality in the negotiations soon to be held at Kiahkta, as provided for by the Declaration, and also in all future ones, but the Khalkas know they are helpless and that, for the time being at least, their fate is sealed, for while Russia for the attainment of her own ends is desirous to keep back the Chinese from Outer Mongolia, she is not desirous to assume the unknown responsibilities which an independent Mongolia would certainly impose upon her.

The responsibilities which Russia has already incurred in Outer Mongolia are great, and the difficulty and importance of

permanently establishing her political and commercial supremacy in the country are daily becoming more fully recognized by her.

The Khalkas, it must be borne in mind, are a purely pastoral people, some 700,000 in number,* occupying a very extensive territory only suitable for agricultural pursuits in some of the valley bottoms. Outside of a slight knowledge of reading and writing (the reading being nearly entirely confined to religious works) they possess absolutely no education, nor has their form of civilization advanced at all since the middle of the 13th century when they first became known to us, except by the introduction among the well-to-do people of a few domestic articles used and manufactured exclusively by the Chinese, and by the present rather general use of stuffs, silk, cotton and woollen, of Chinese, foreign and Tibetan origin, instead of the furs and skins of which they used formerly to make their clothing. The Southern Mongols, it should be noted, on account of their proximity to and constant intercourse with the Chinese, are much more advanced and self-reliant; education of a sort has made some slight progress among them and they are given, to a certain extent, to the tilling of their lands.

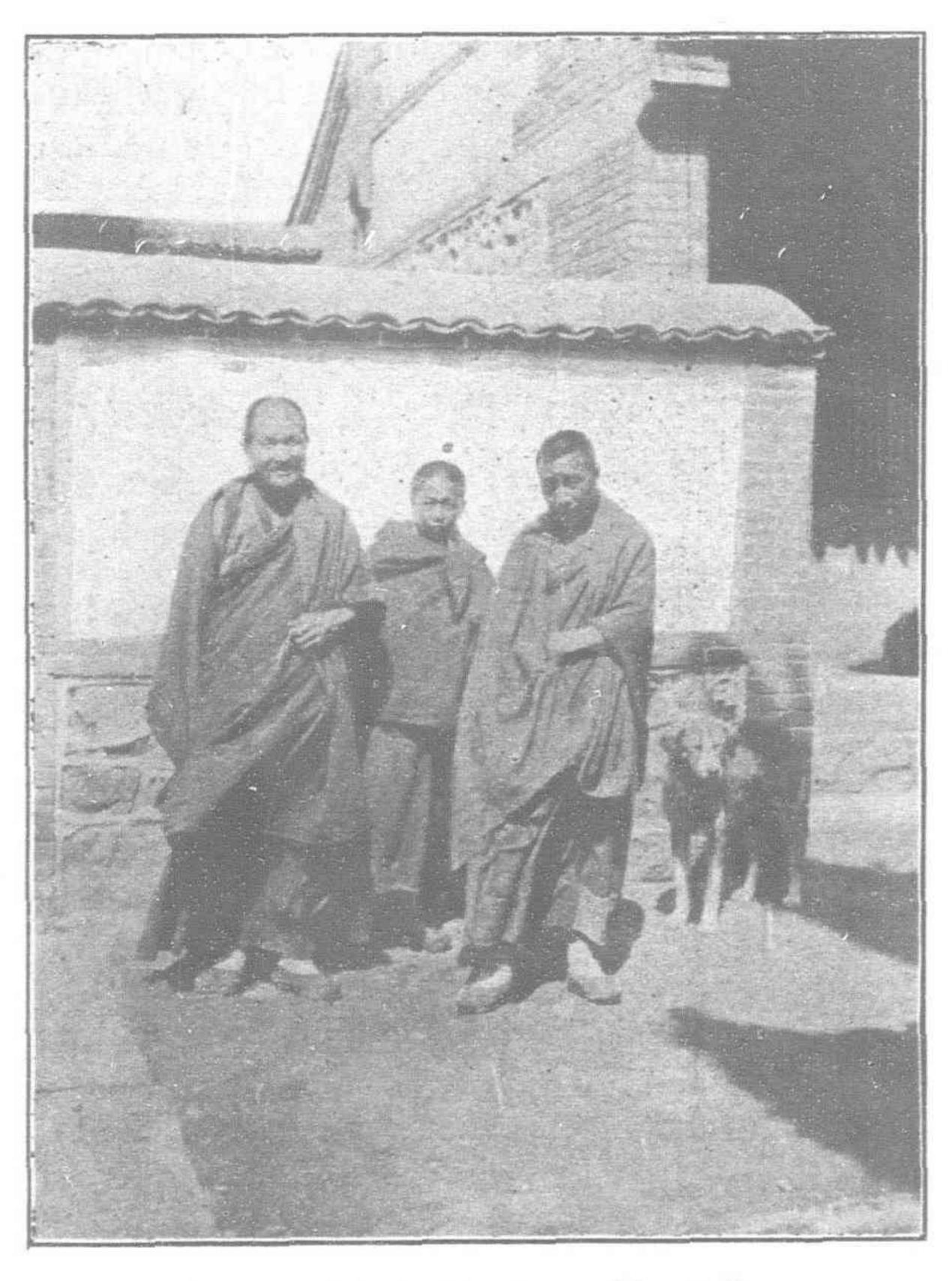
Exclusive of tending their flocks of sheep, their ponies, camels and cattle, the Khalkas know no trade, nor do they care for anything else; easy-going and lazy, they are the most gullible of men. They cannot manufacture a single object used in their simple way of living save an inferior quality of felt and tent frames. Everything else is bought in China or brought to them by the Chinese; even their saddles, bridles, boots, teapots, wooden cups and numerous other articles come from there. Were it not for the Chinese farmers (mostly from Shantung) who have irrigated in many places the fertile lands of the larger valleys and raise wheat and millet for them, they would be reduced to an exclusive diet of meat, butter, milk and cheese.†

With the loose political bonds which hold the tribes together the taxes are paid by the people to their princes, who, while not paying taxes themselves, must hand over a portion of their incomes to the Hutuketu and to the innumerable rapacious lamas who swarm in every corner of the land, and another still until recently to the Ambans and to the Chinese, with whom they have business relations; for Mongol princes have always been the principal traders of their tribes. All this has effectually prevented the creation of any central government, if the desire to establish one ever existed, or of a national treasury. Furthermore the incidence of taxation is everywhere most irregular, and the levying of the taxes always attended with great difficulty. To add to the burden of the Khalka taxpayers a considerable portion of the population (some persons at Urga told me it might amount to 50,000) are serfs of the Hutuketu, shabin, and as such neither pay taxes nor own property of their own, but labor solely tending the numerous flocks and herds of that dignitary. Even the royalties paid by the Russian Mongolor gold mining company went to add to the revenue of two of the princes: there was not, at the time of the Declaration of Outer Mongolia's independence, a single revenue on which it could count.

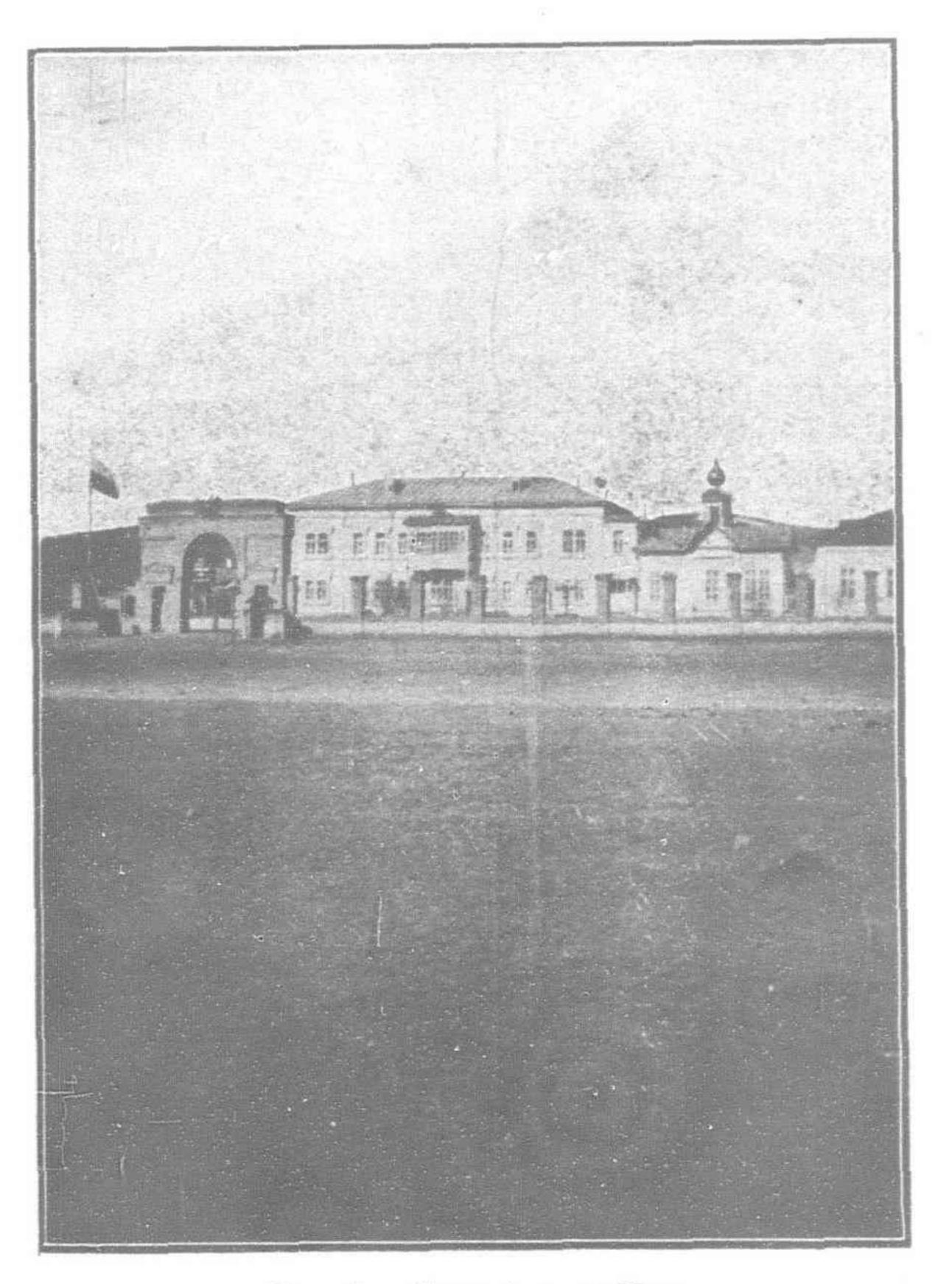
The financial question was consequently the first which faced the Russians when they lent their aid to the Mongols to support their new government. The simple process had recourse to was making a gift to the Hutuketu's government of two million roubles. The way part of this sum, at least, was promptly expended by the Mongols is an illustration of the state of blissful ignorance of the value of money in which they live. They erected an imposing temple, in which they put a colossal image of the Buddha Maitri of gilt copper, and ordered ten thousand small images to be placed on the walls of the temple around it; nine thousand being ordered in Russia at a cost of Rbls. 144,000, and one thousand in China at a cost of Rbls.

^{*} The population of Outer Mongolia seems to have decreased considerably. In the middle of the 17th century it was estimated at 600,000 families or about three million. Du Halde, Déscription de l'Empire de la Chine, IV, 46.

[†] There are said to be about 20,000 Chinese in Outer Mongolia, 5000 of whom are in Urga, 2000 to 3000 at the Mongolor gold mines in summer, in winter they add to the Chinese population of Mai-mai-chen and Kiakhta.



Lamas of Kalachin, Inner Mongolia



Russian Consulate at Urga



Vast Pasture Lands of Mongolia



Mongol Married Woman's Dress



Typical Mongol Herdsmen

36,000. They have also had made in St. Petersburg at great expense insignia for an order, the order of the Vadjir, which has been freely distributed to Russian officials, and in the creation of which foreign suggestion must have played a large part, as

decorations were previously unknown among them.

Their first success at raising money encouraged the Mongols to believe that they could get more from the same source, especially as the missions they sent to St. Petersburg to thank the Emperor and his government for their bounty were received with honor and loaded down with decorations and presents. So they asked for a loan of three millions of roubles, and, pending its being granted, they have tried to make shift with small sums of ten or twenty thousand roubles borrowed wherever they could, usually from the Russian government. Prior to the declaration of independence they had got at odd times considerable sums from the agent of the Chinese bank (Ta Ch'ing Bank) at Urga. When the last Emperor abdicated, the Mongol Minister of Foreign Affairs settled this indebtedness by declaring that, as there was no longer any Ta Ch'ing Dynasty, the Ta Ch'ing bank had also ceased to exist, and consequently there was no creditor to whom the money was due.

The Russian government in their first zeal to lend their support to the nascent state suggested that it would be advisable, for the purpose of establishing credit and developing trade, to open a Russian bank at Urga, where the Russo-Asiatic Bank had sometime before closed its doors. The Khalkas began at once to clamor for the bank, such an institution being, according to their views, one which supplied unlimited amounts of ready cash to all comers. They are still clamoring for the bank, but Russian banks seem disinclined to try the venture, though it seems probable that one will be ultimately established there, but the infantile incompetence of the Khalkas in all money matters becoming more and more apparent to all observers, the bank has still to be opened, and the loan is not yet granted. It is generally agreed among wellinformed Russians that no large credit or revenue should be made over to the Hutuketu's government unless there is effective supervision as to its expenditure, and this the Russian government have pledged themselves not to do by Article III of the Peking Declaration of November 5th, 1913.

If the Russian government is not disposed to bear permanently nearly the total burden of administering Outer Mongolia, sources of revenue must be found in the country; but here again difficulties are numerous. We have referred previously to the disposition made of the direct taxes levied on the people. However small they may be, it seems highly improbable that they can be increased, as the majority are very poor. A source of considerable revenue should be an import tax, but this, it would seem, is dried up completely at its source, for Russia has free trade in Outer Mongolia "for products of Russia, Mongolia and China," and the last named country cannot be expected to accept less favorable treatment; consequently should a customs duty be imposed on her export trade with Outer Mongolia it seems infinitely probable that she will adopt retaliatory measures. The trade of other foreign nations—unless they can secure directly from Outer Mongolia the same trade privileges as the Russians enjoy-will be carried on under the Russian flag; the net result is no revenue whatever from any foreign trade.

Suggestions have been made to the Khalkas for raising revenue by taxing liquor and tobacco; levying a poll-tax on the Chinese; even the issuing at short intervals of new and attractive postage stamps has not been omitted from these suggestions, but they do not commend themselves to the Mongols and would probably produce next to nothing. As to oppressing the Chinese, were they driven out of the country, the Khalkas would half starve and have to go unclad.

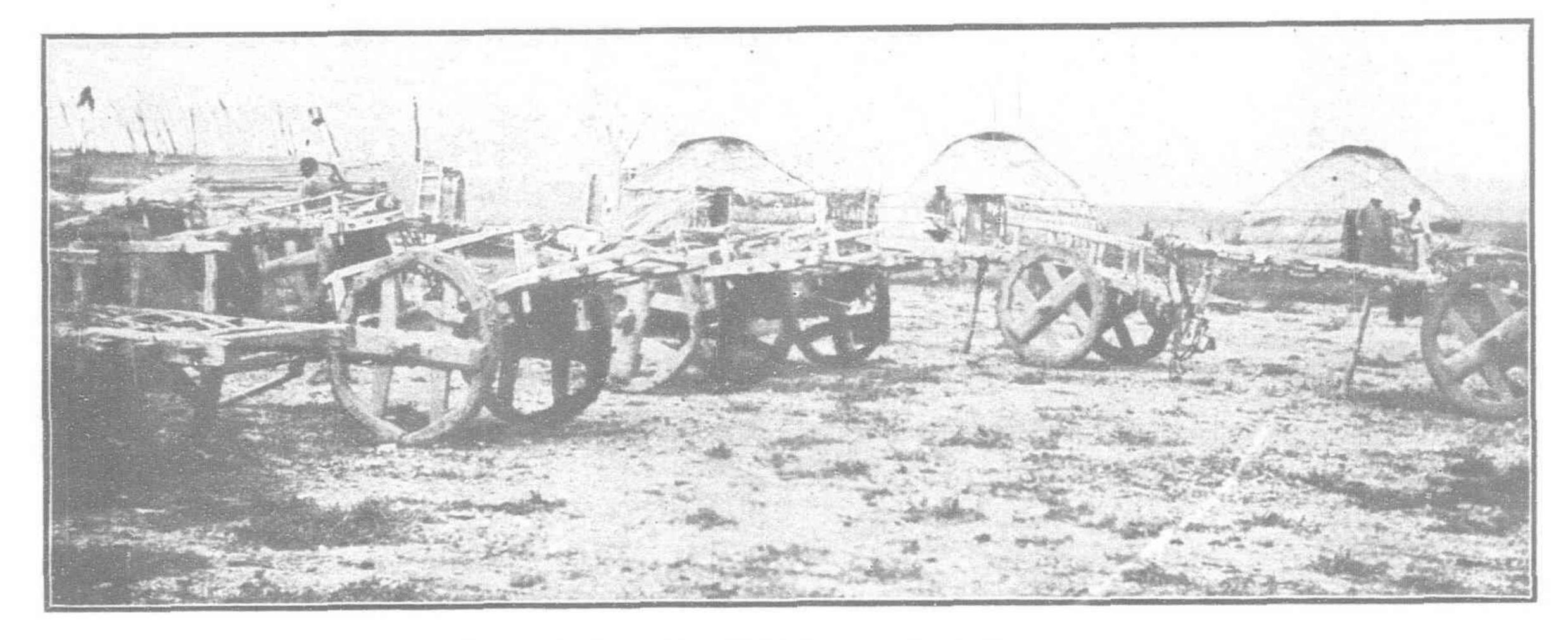
The royalty paid by the Russian Mongolor gold mining company has become of late a state revenue, and I think probably the principal one, but though it is 16½% of the gold extracted, it does not amount to very much; what with the primitive methods of operation and stealing by the miners, the production of these placer mines has fallen off considerably. In 1912 it was 72 poods or 2,592 English pounds, while last year it fell to 46 poods or 1,650 pounds. A foreigner offered them last year a million roubles a year for the exclusive right to import and sell opium in Outer Mongolia during five years; though they rather liked

the idea the Russians have so far been able to dissuade them from taking such a fatal step.

The flocks and herds of the Khalkas might be increased in numbers and value, and by that means their taxable property would appreciate considerably. But to attain that end time, the stamping out of the rinderpest and the introduction of a finer breed of cattle (of which there seems to be none nearer than Europe) are all needed, and, last but not least, the education of this rather dull people to an appreciation of the value of the measures being taken would have to be brought about, an Herculean task again, but seemingly the only one which may help to develop to any extent Outer Mongolia, whose economic value, I venture to believe, will never greatly rise beyond what it is at present, as long as the Mongols are in possession, at all events.

It proved an impossible task to obtain accurate, not to mention full. data as to the value of Outer Mongolia's trade with China and Russia. The trade of Urga, and most if not all of the Uliassutai regions, centers in Kiakhta. From the Returns of Trade for the year 1911, published by a committee of the Merchants' Guild of Kiakhta (this is the latest I have been able to secure, but it is not likely that 1912 and 1913 returns would disclose any very great difference in excess), I find that the total value of Mongol products imported into Russia during that year through Kiakhta was five millions of roubles, or 21 million dollars, while the value of the goods exported to Mongolia from the same place during that period was Rbls. 1,230,000 or about 615,000 dollars. The balance in favor of Mongolia, about 1,885,000 dollars, less the value of Russian imports into Mongolia (Rbls. 800,000) represents approximately the value of the import trade of Outer Mongolia during the same period from China, exclusive of course also of that of the trade of Kobdo, which goes to Biisk, and which is certainly not over a third as valuable, say roughly two millions of roubles. That Russia can deflect the bulk of this import trade of Chinese products into Outer Mongolia to her home markets, as some Russian commercial bodies seem to believe feasible, seems under present conditions highly improbable. The trade between Russia and Outer Mongolia is now, as it has been for long years past, a practical monopoly of a few large Russian firms in Kiakhta, all of which have branch houses in China besides agencies in Urga and Uliassutai. Unmoved by patriotic considerations they seek to put on the Mongol markets the goods most favored there, and as these happen to be Chinese products they import them from China via Kalgan but under the Russian flag, and act simply as consignee or brokers for Chinese houses, thereby reaping a good profit at a minimum outlay of money.

At the present one of these Russian firms controls absolutely navigation on the Selenga River by which the great bulk of the trade of Mongolia via Kiakhta must pass to reach the railroad at Verknie-Udinsk. Whenever a railway is built to Kiakhta this monopoly will be partly broken down and Russian products will be more readily offered to the Khalkas, but even at equal prices it is unlikely that they would easily displace the better known and long-used Chinese articles. The importance of at least controlling the tea trade with Outer Mongolia, where tea is not only an indispensable article in the simple diet of the people, but an actual currency, is well known to the Russians, and so they have endeavored to divert it, at least from the direct land routes via Kalgan and Kuei-hua-cheng to the indirect route via. the Yangtze river to Vladivostock, Verknie-Udinsk and Kiakhta. This they appear to have done to a certain extent, but at a very considerable cost to the Russian government, which has been obliged to reduce the cost of transportation of tea over the Chinese Eastern Railway to a nominal sum. How long the government will be willing to grant such rebates when normal conditions have been re-established in Mongolia and caravan trade is once more active, remains to be seen, but this experiment shows how put to it the Russian government find themselves to divert Outer Mongolian trade from its natural channels. No fuller exposé of the difficulties which confront Russian economic development in Outer Mongolia, or of the measures the government have in contemplation for improving it, can be found than in the discussion which took place in the Budgetary Commission of the National Duma on November 28th, 1913. The Minister of Commerce then stated that, notwithstanding the efforts here-



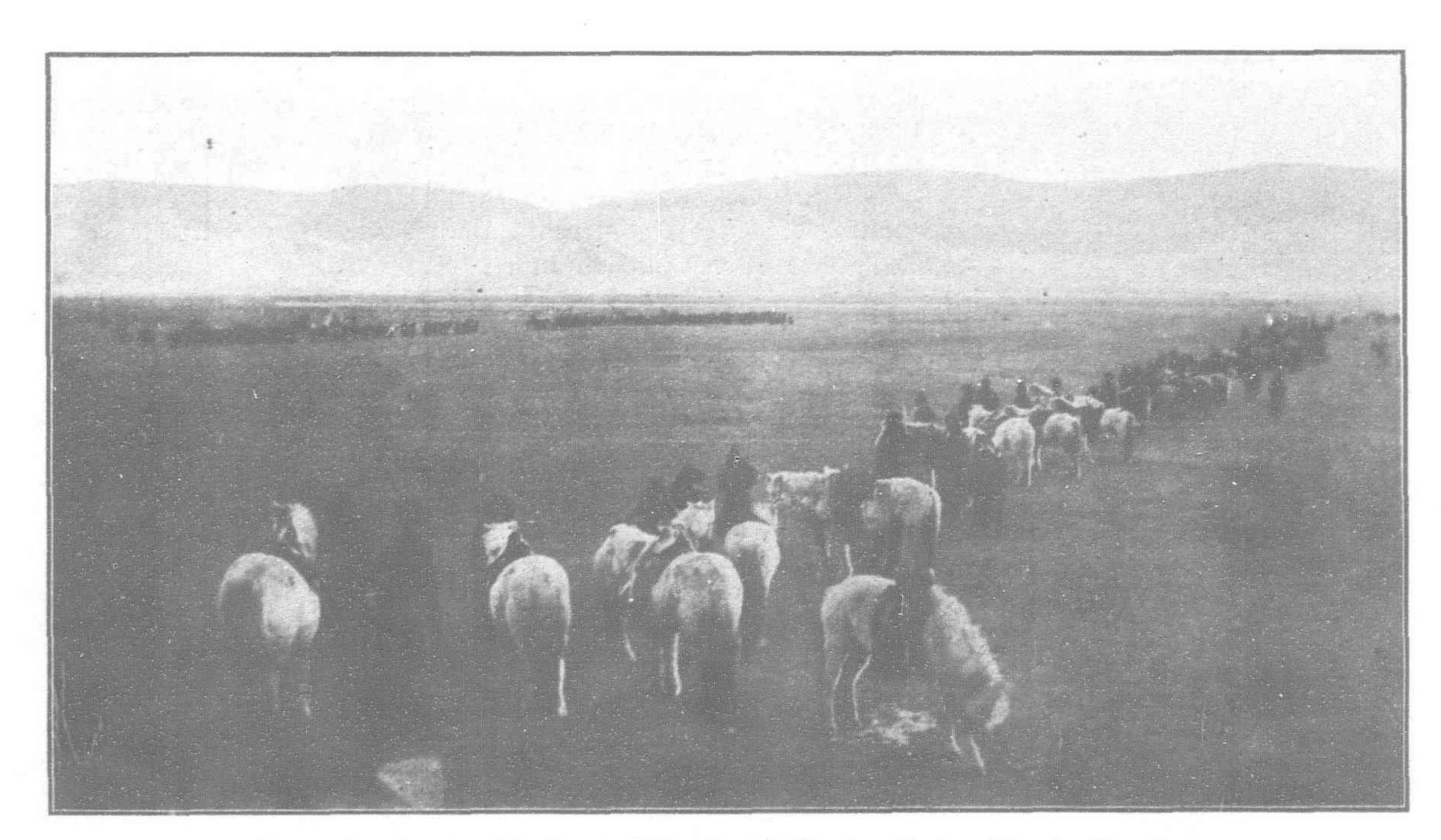
Type of Mongolian Vehicles-Bullock Carts



Pilgrims on Way to Mongolian Shrine



Lamas of the Mongol-Chinese Borderland



Mongolian Cavalry Waiting to Take Part in Review Ordered by the Hutuketu

tofore made, Russian trade with Mongolia was still falling off. The organization and development of this trade was, however, a matter for private enterprise, the government could only insure favorable conditions. The small sale of Russian goods in Mongolia was due to the very small purchasing capacity of the Mongols, and to the absence of organized credit. The institution of a bank in Mongolia would encourage trade and the Ministry of Finance was ready to offer its assistance to this end. The cost of railway transportation of goods for the Mongol market had been reduced and regulations have been made for the granting of customs drawback certificates and establishing a free list. Furthermore a commercial Agency had been established at Urga, but as it had proved itself of limited usefulness its duties and means of action would be extended. (See "Novoe Vremya." 15/28 November, 1913.)

The various points mentioned by the Minister of Commerce in this discussion have been referred to in previous passages of this paper, and what appears to be the real reasons for the unsatisfactory condition of Russian trade in Outer Mongolia have been given; the firmly established preference for Chinese products and the impossibility for Russian trade (exclusive of that of Kiakhta) to compete on the local markets unless assisted by preferential freight and customs rates, are the principal obstacles.

The general conclusion I have reached is that nothing short of the expulsion of most of the present Russian firms and small traders now engaged in the Outer Mongolian trade* and the substitution of Moscow firms, the exclusion of all possible foreign competition, together with the maintenance of preferential treatment for home trade and the forcing of all Chinese imports to come by the Vladivostok-Verknie-Udinsk-Kiakhta route, can secure to Russia the economic control of Outer Mongolia. With the right for this country to concede equally favorable trade conditions to other nationalities and the practical impossibility of excluding Chinese goods from the direct route the task seems quite an impossible one.

Certain measures have quite recently been suggested in Russia by persons and organizations taking interest in the question of Outer Mongolian trade, for the betterment of economic conditions there. One urges the improvement of the roads and waterways, another, the Irkutsk Chamber of Commerce, advises the free entry into Russia of Mongolian products, the organization of a veterinary service in Mongolia to combat the rinderpest, and the establishment of Russian telegraph stations and post-offices. None of these measures, except the organization of a larger veterinary service (one already exists) would appear likely to serve, or in any way benefit, the Mongols, or extend Russian economic control over the country.

The best Russian work on Russo-Mongol trade is, according to all Russians, official as well as men of business in Siberia and Mongolia when questioned on the subject, that published in 1910 by Bogoleipov and Sobolew entitled "Otcerki Russko-Mongoliskoi torgovli," or "Outline of Russo-Mongol Trade." The conclusion reached by these writers after careful study in Mongolia and Siberia of this matter is given in Chapter XX of the work (pp. 474-490). They accept the fact of the steady falling off of Russian import trade into Mongolia and of the futility of hoping to drive out Chinese competition, even if all the measures advocated by the Russian Government, commercial organizations and individuals are carried through. They condemn the substitution of constant governmental assistance in fostering and developing this trade, while attempting at the same time to maintain the general high cost of production of Russian goods. Individual initiative and enterprise, with which the Chinese engaged in Mongol trade are well supplied, is in their opinion, the only hope for bettering the situation.

"The extension of Russo-Mongol trade shows how necessary it is for the individual as well as the nation to seek their power

and strength within themselves. Russia turned to the East in the hope that her higher civilization would open a market to her industry. She could not possibly expect to find a market for that industry in the West, but in the East Russian goods have appeared in the same manner as Russian industry exists within Russia, to wit under strong escort. Within Russia industry is escorted by customs duty, by preferential tariffs, by loans and supports. In the Far East the Russian merchant was always preceded by the soldier's bayonet, by concessions, privileges, special treaties and large expenditure of Government gold. Only in Mongolia has Russia appeared on an outside market without this escort. Here she was for the first time seen advancing in a purely commercial way. Russia's right of duty free trade in Mongolia was counter-balanced by the competition of lower priced English and American goods, and by the fact that the trade has, up till now, to count with considerable difficulties of conveyance and the primitive conditions of Mongol life. The result of this trial of open competition in a foreign market has, we much regret to say, given proof that we are not yet strong enough to maintain a purely commercial position."

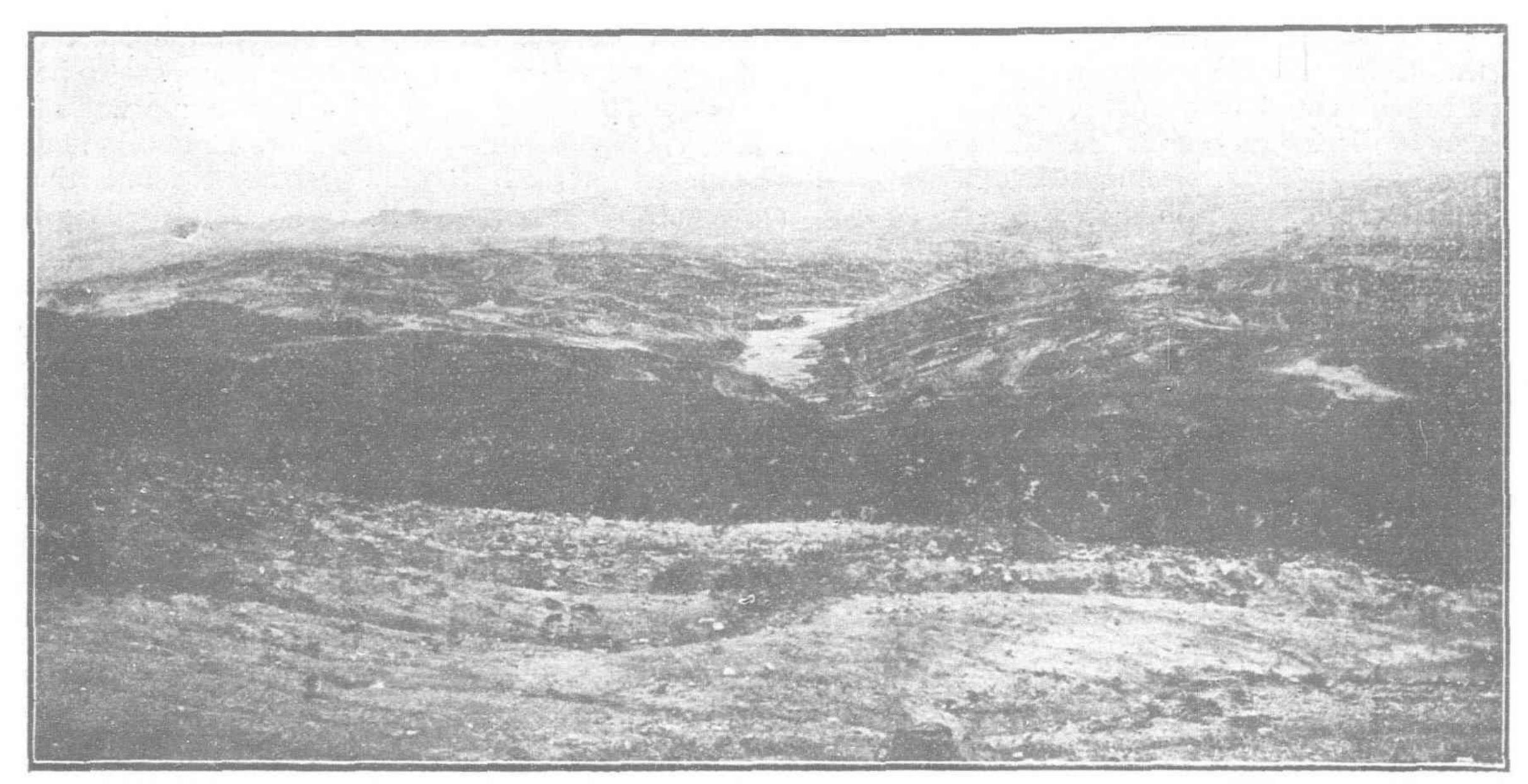
The remedies advocated by the writers are (1) the creation of a buffer state in Northern Mongolia, (2) the stopping of Chinese colonization, "a danger not only to the Mongols but to the white races," and (3) the organization of Russian trade, the principal factor of which should be the cheapening of Russian goods on the Mongol market so that they can compete with those sold by the Chinese. In urging these measures the writers seem to have lost sight of their previous contention that governmental assistance could never take the place of individual initiative, but they foreshadow correctly the policy which has since then been followed by the Russian government.

The only way out of the difficulty of maintaining an autonomous Outer Mongolia, subject to the conditions laid down in the Urga Convention and the Peking Declaration, would seem to lie in the direction of establishing a complete and hearty co-operation to that end between Russia and China for its administrative and economic development. This would include a willingness on the part of these two countries to allow the establishment of a low tariff of duties, say 5 per cent or even 3 per cent on all imports into the country, the Customs service to be, if possible, under joint foreign management. This would give a certain small revenue to the government at Urga, which, added to the sums it will probably continue to receive from gold mining, timber felling rights, and various other concessions, and the ordinary taxes in force in the country should, with economy and honesty (two very difficult things to obtain, however,) prove sufficient for their simple administrative needs, including even the maintenance of the small native cossack brigade now being organized under Russian officers, if it is not increased beyond its present force of 1,500 men. If some such arrangement is not arrived at, the alternative seems to be the financing of Outer Mongolia by Russia.

So far the assistance the Russian Government has given to the Khalkas has been mainly, if not exclusively, confined to Urga. The first step was the organization of a small force to police the country. The Urga government showed themselves disinclined to see it undertaken and opposed apathy and childish objections, and it was not without some difficulty and the promise of ample assistance to carry out the scheme that it was finally agreed to. In May or June, 1913, a small Russian military mission arrived and having established a permanent camp at a place called Hujir-burun, about five miles east of Urga, began the recruiting and instruction of a small force of cavalry, the equipment, arms, ammunition and six light mountain guns being also presented by the Russian government.

They have also opened a small hospital, equipped the "Russo-Mongol Printing Office" where a bi-monthly paper, the first of its kind, called the "Shiné toli khéméhu bitchik" or "New Mirror" is printed in Mongol, but it finds very few readers. A contract had been made with an enterprising Russian to open a service of motor busses between Urga and Kiakhta, he assuming the charge of repairing (practically making) the 170 odd miles of bad road between these two places. It seems probable that some time will elapse before this service is opened. A small school has been established

^{*} There are said to be in Urga 1,000 Russian subjects—exclusive of course of civil officials and the Agency escort—a considerable portion of whom are, I take it, Buriat Mongols. At the Mongolor gold mines there are said to be in the working season some two to three thousand Russians.



Nearing the Great Gobi Desert of Mongolia

(it has not over ten pupils) in which to teach the Khalkas Mongols to maintain the national and historic constitution Russian. Furthermore, nine promising Khalka boys have been

placed in schools in Irkutsk, and about the like number at Troitskosarsk, or Kiakhta.

The old Russian concession

in the Mongol town of Urga being inadequate a much larger one of 270 desiatines has been granted the Russian government between that town and Maimai-cheng, including in it the Diplomatic Agency and other official buildings. Here two or three Moscow merchants have been induced to buy lots of ground, around them high palisade fences have been put, but on them no building will probably ever be placed. A diminutive police force (six cossacks of the escort of the Agency) has lately been put on duty in the old Russian concession, and an enterprising Russian trader has started a cinematograph; such were the principal signs of Russian governmental and private activity at Urga when I was there in December, 1913. Among the Khalkas their new gained liberty has not caused an awakening of any dormant energy. The Hutuketu's government have confined their activities to starting a little school in which to teach Russian, and the Ministry of War had "under consideration" the building of a prison to take the place of the horrible palisaded inclosure in which malefactors are now confined and, if reports are true, most cruelly treated. Public works of any kind (the filth in Urga is indescribable, the dead are frequently thrown by the wayside to be devoured by the herds of dogs which swarm

Caravan at Rest in the Desert

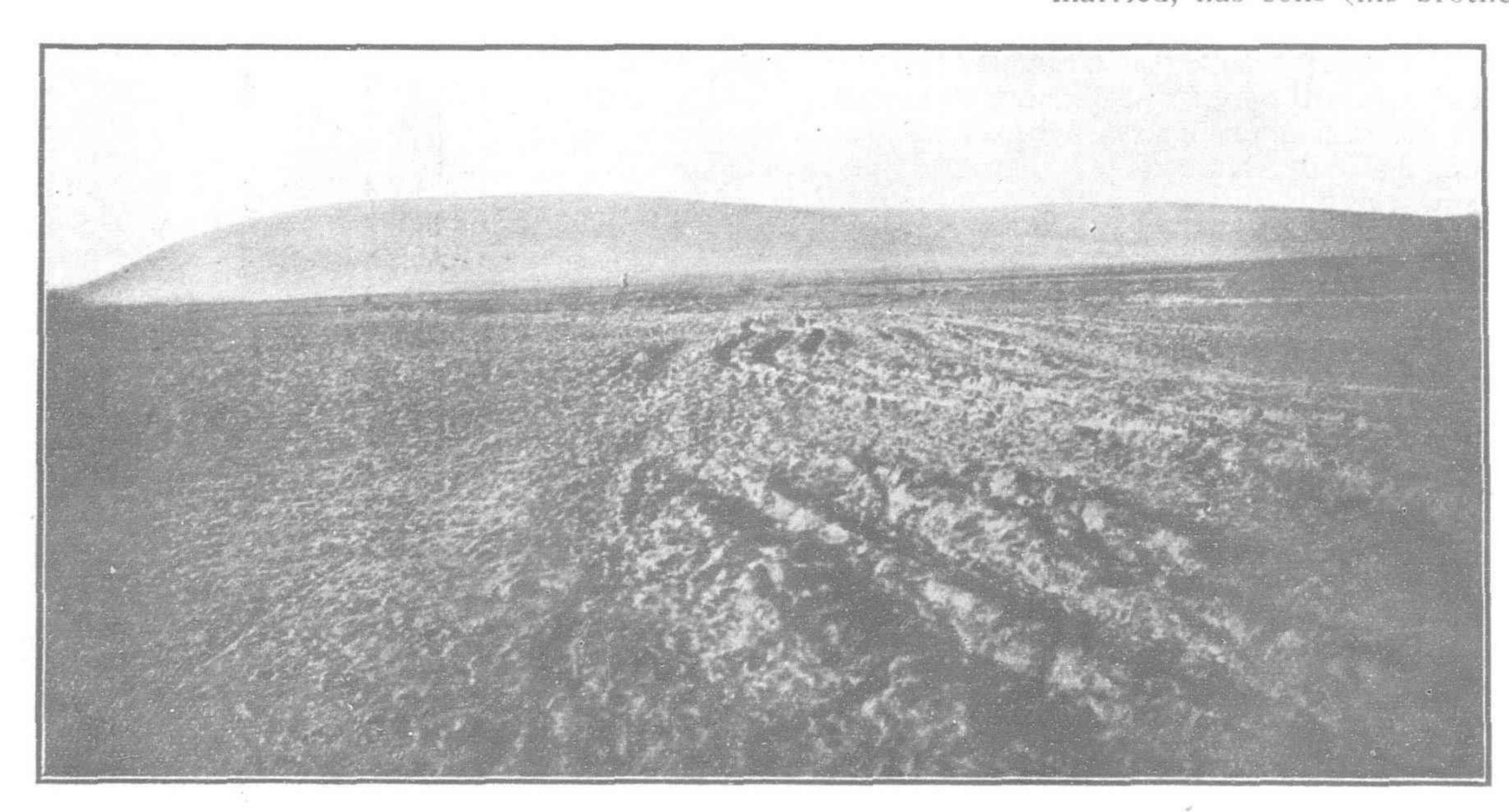
over the whole place) will have to wait for money to come into the coffers of the state; till then, at all events, nothing can or will be done -afterwards it will probably be as before.

A number of serious questions confront the Khalkas, one of which, at all events, must promptly be solved. There are absolutely no fundamental laws for the organization of the new confederacy or for its administration. The question of succession to the rulership even has not been taken up. Nothing has been done to strengthen the former loose organization of the country in which Chinese authority could always be appealed to and was always forthcoming, to guide or control their views or actions.

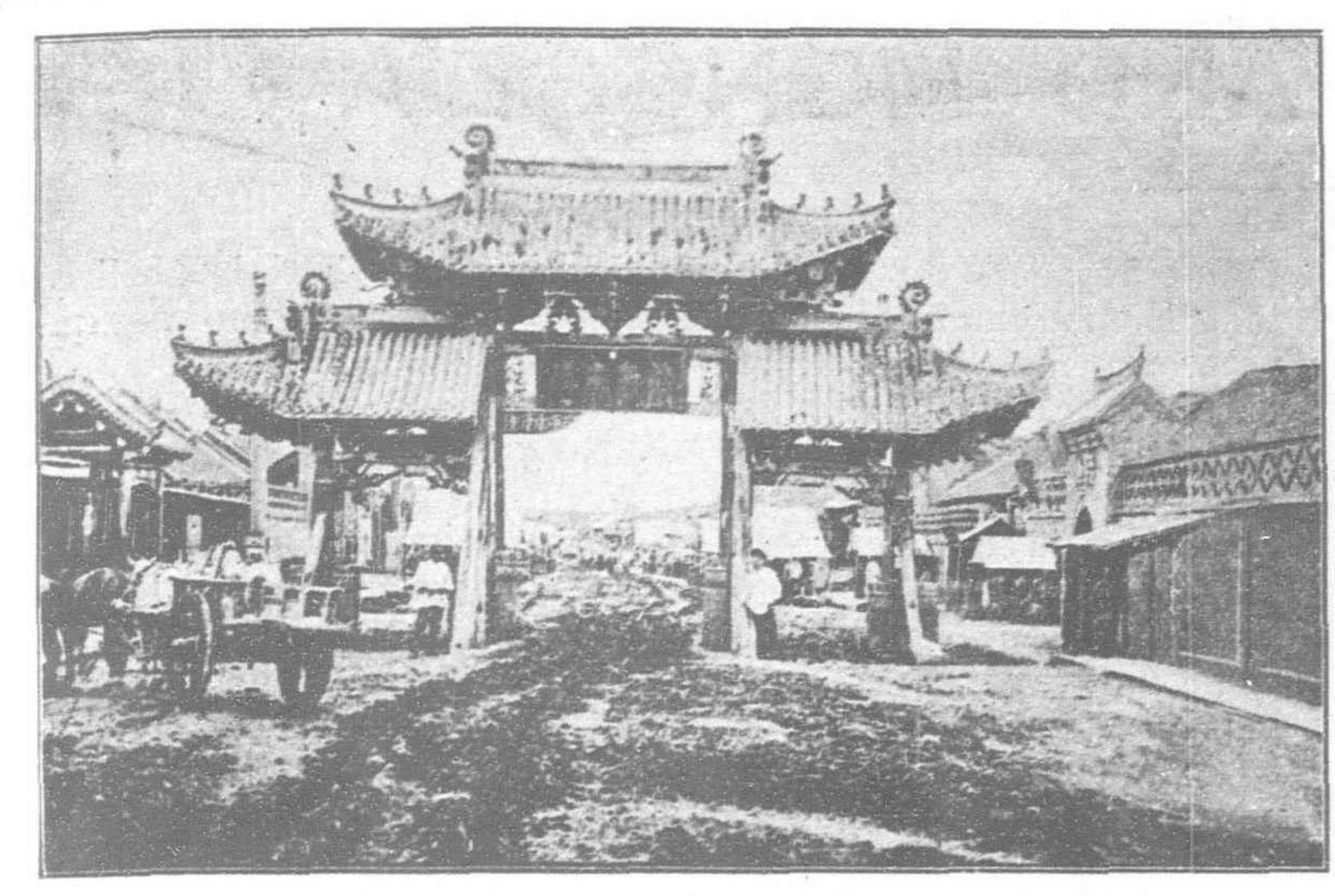
Although, to use the language of the Urga Convention, it was in accordance with the desire unanimously expressed by the

of their country that the Jébtsum-damba Hutuketu was proclaimed Ruler of the Mongol people," nevertheless this choice does not appear to have coincided with the unanimous wish of the various princes and chiefs, many of whom hoped that a ruler of their own race and a member of their ancient nobility might found a dynasty to rule over them. Agitation in favor of this nationalist solution of the dynastic question became strong during the last year and the Sain-noyin Khan, the actual President of the Council of Ministers, was considered the strongest, noblest and most popular ruler the country could have to establish the new Mongol empire.

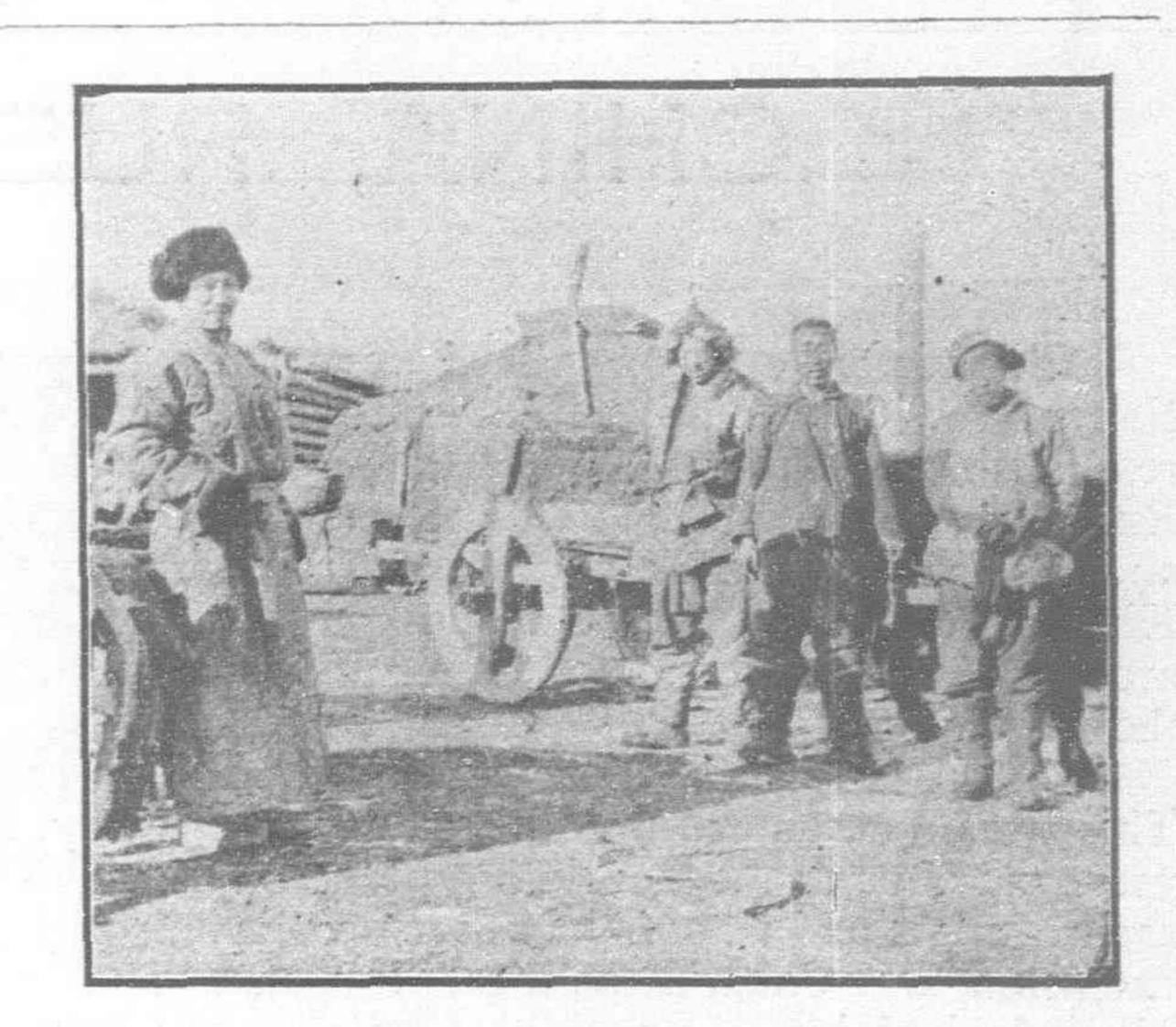
> On the other hand the Hutuketu, or as he is now styled the Bogdo Khan or "Holy Prince," though a lama, is married, has sons (his brother



View Along Caravan Route Skirting the Gobi Desert



Gate of Sansing, an Important Town in Northeastern Mongolia



Chinese Colonists between Kiakhta and Urga

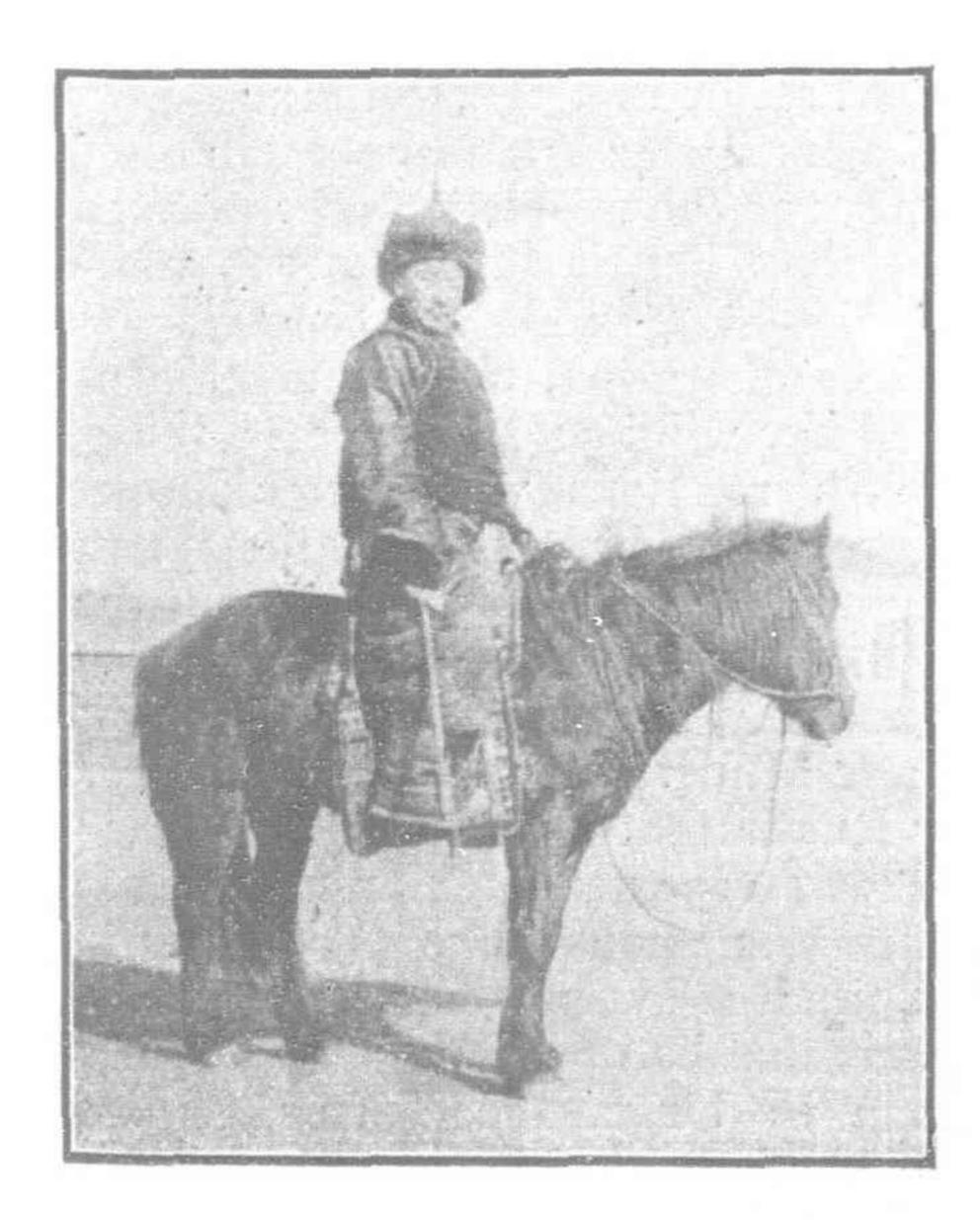
the Ta Lama is also blessed with children) and hopes to establish his dynasty. While the Russian government lends him their support for the time being, it can hardly be doubted that they would see with no particular concern the substitution of a manly, intelligent, though inexperienced Mongol prince in the place of the notoriously debauched Tibetan lama. Besides his personal unfitness there is another reason for apprehension if the Hutuketu is maintained in power, which is his well-known ambition (the first Hutuketu, as we have noted previously, had the same ambition) to create an independent lamaist church in Mongolia. Any attempt to carry it out would most likely create serious internal dissensions, for the authority of the supreme head of the Yellow Church, the Talai Lama of Tibet, is everywhere recognized in Mongolia, and it could not easily be put aside, although the severance of Outer Mongolia's relations with China may enable the Hutuketu to fill all ecclesiastical offices with his creatures, such offices being no longer, as heretofore, under the control of the government at Peking.

There are other questions, both of a political and economic nature, which must cause the well-wishers of the new state grave apprehension, but enough has been said, it is thought, to justify my belief in the wisdom of the present policy of a minimum interference on the part of the Russian government in the affairs of Outer Mongolia, so long as the cardinal principles of their defensive policy in the Far East are fully recognized by all interested powers. The strict enforcement of these principles may, some day, carry Russia much further than she desires, but until there is another general reversal of her policy

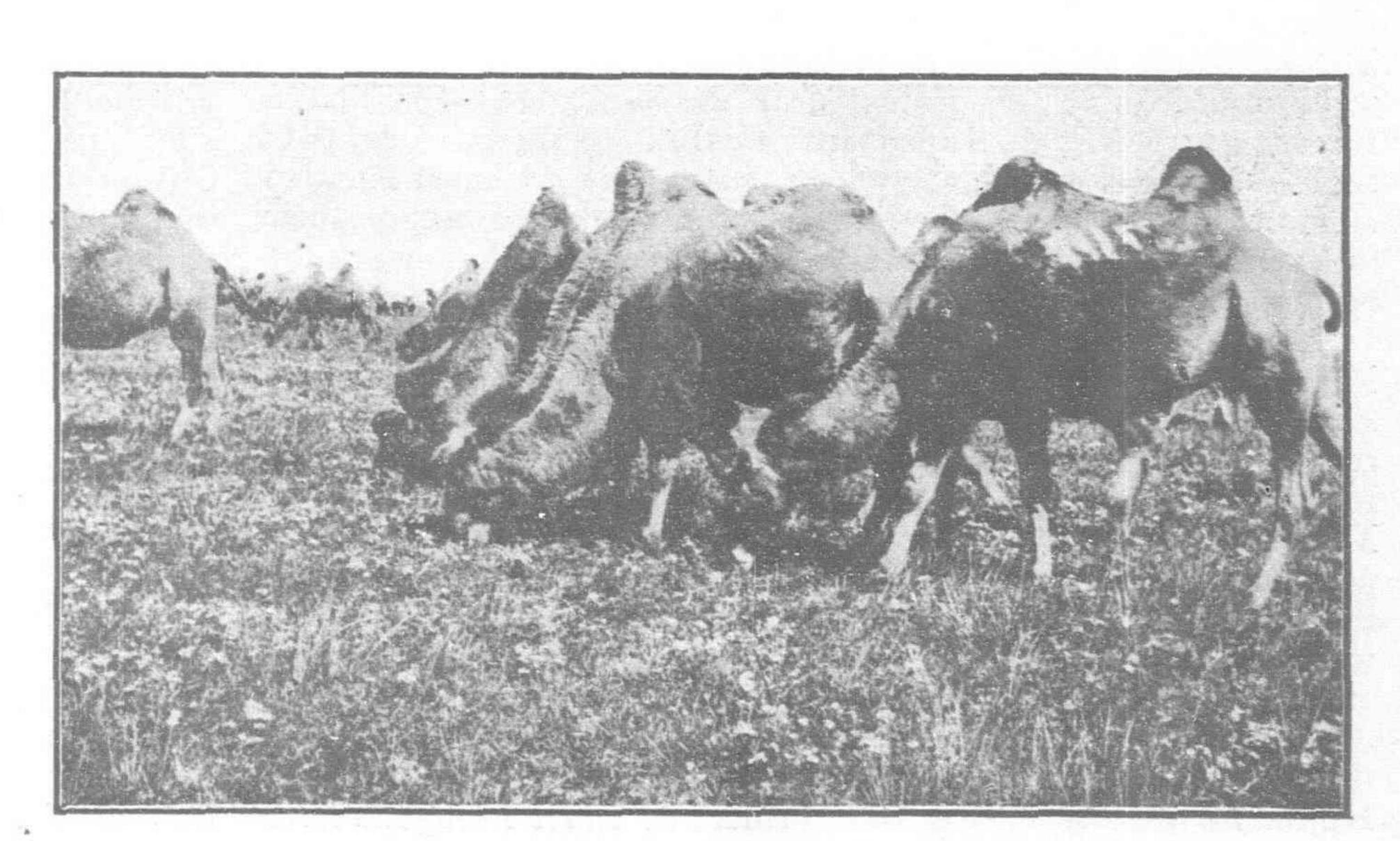
in Far Eastern Asia this seems unlikely; things in Outer Mongolia will go on much as before.

As I finish writing I have received a copy of the very recently published work of M. Douglas Carruthers, entitled "Unknown Mongolia." In a most instructive chapter dealing with Mongolia, past and present, the writer, speaking of the secession and the establishment of the autonomous government, says that "taking for granted an autonomous Mongolia under the protection of Russia, we can prophesy far-reaching and fundamental changes in the lives of the people and in the future of the Mongol race. Mongolia will become a land of activity and progress instead of, as formerly, a land of stagnation and suppression. Russian merchants will flock into the country, railways will be constructed, vacant lands will be used for agricultural purposes, and waste land reclaimed. There will be facilities for trade, which will prove advantageous to the Mongols as well as the Russians..... Foreigners will work gold reefs, with the result that Chinese suzerainty and the church will lose no small amount of prestige. With this new movement and activity the old lethargy will no doubt decrease, and, we hope, eventually disappear."

This prophecy may some day in the far future be partly realized, but I can see no sign of such a consummation, and I must rather agree with Mr. Carruthers' other statement in the Introduction to his work, viz., "Who would dare to prophesy the future of the marches of Siberia and China?"



Mongol Official on Inspection Tour



Camel Herd on the Grazing Grounds of Mongolia

CHINA, RUSSIA AND MONGOLIA

China is to be congratulated upon the satisfactory termination of the Conference at Kiatchka summoned to determine the relationship of Outer Mongolia to the Republic of China and to Russia. As a result of this Conference, at which China, Russia and Outer Mongolia had representatives, a Treaty was signed at Kiatchka on June 7 which settles most of the questions which arose out of the secession of Outer Mongolia from China during the Revolution.

Outer Mongolia has always enjoyed a kind of semi-autonomy. This was guaranteed by the Manchu Dynasty, but for many years previous to the Revolution peaceful penetration by Chinese agriculturists and traders had been accompanied by a perceptible extension of China's political influence and power. The Mongols had but a primitive idea of agriculture and still less knowledge of trading, consequently they were quite unable to compete with the Chinese immigrants who arrived yearly in ever increasing numbers. Simultaneously the Chinese garrisons in Outer Mongolia were increased. These developments were watched by the Mongols with alarm and resentment, but it was not only the Mongols who regarded the Chinese pacific invasion with anxiety. Russia has always been obsessed by a fear that Siberia, now sparsely populated and offering great attractions to an industrious and frugal people such as the Chinese, would in course of time be submerged by successive waves of Chinese emigrants. Experience had shown that the Russian peasant, low as his scale of living is, has absolutely no chance in competition with the Chinese. So thoroughly has this lesson been learnt that drastic legislative measures have been taken from time to time to keep the Chinese out of that portion of Siberia lying East of Lake Baikal. Even what was regarded as the urgent military necessity for the speedy completion of the Amur Railway was not held to justify the employment of Chinese labour. It was feared by Russian statesmen that, after the Chinese had settled upon all the productive soil of Outer Mongolia, the dam interposed by the political frontier would be subjected to a strain which it could not withstand and the human flood would sweep into Siberia. It became a cardinal object of Russia's policy to Preserve Outer Mongolia for the Mongols, as the latter were comparatively few in number and could not become a menace to Russian interests in Siberia. The policy of the Russians and Mongols was, therefore, identical in so far as it concerned the incursion of Chinese immigrants to Outer Mongolia.

The resentment that had hitherto been felt by the Mongols at the assumption by the Chinese of greater power than was consistent with the guarantee of autonomy, was inflamed by the policy of San-to, the last Chinese Amban to officiate in Urga. This official in 1911 vigorously promoted the immigration of Chinese; increased the Chinese garrison at Urga, and gave the Mongol chiefs plainly to understand that China's suzerainty was to be respected. So discontented did the Mongols become that, a few months before the outbreak of the Revolution in China, they sent a Mission to Petrograd to endeavour to enlist Russian support in the action they proposed to take to secure their independence. Before this Mission had completed its work the revolutionary outbreak occurred at Wuchang and the rapidity with which the movement gained ground so encouraged the Mongols that in December, 1911, they expelled the Chinese Amban and the other Chinese officials. The Chinese troops retired from Outer Mongolia, and the Mongols declared their independence. The Urga Hutukhta was proclaimed sovereign of Mongolia and a central government was formed. Barga, a portion of the Manchurian Province Heilungchiang, threw in its lot with Outer Mongolia. It will be noted that the Hutukhta was proclaimed Sovereign of Mongolia, not of Outer Mongolia, and in the Russian-Mongolian Agreement of November, 1912, the more comprehensive term is employed. But at no time did the whole of Mongolia acknowledge that sovereignty of the Hutukhta, and several of the Princes of Inner Mongolia have throughout remained loyal to China.

Great efforts were made by the Peking Government to come to some arrangement with the Hutukhta whereby the loss of

Outer Mongolia to the Republic-it was at that time believed that Russia intended subsequently to annex the country-could be prevented. These efforts towards conciliation were, however, unsuccessful and the Hutukhta enlisted the aid of Russian officers to create a Mongol army. No great results were achieved. Negotiations were carried on between Russia and China during 1912, Russia seeking to secure China's recognition of the autonomy of Outer Mongolia, but, as no satisfactory conclusion was arrived at, on November 3, 1912, Russia concluded the Agreement with the Hutukhta already referred to. In this agreement Russia promised to give her aid to Mongolia to preserve the latter's independence and its rights of having its national troops and of refusing to allow Chinese troops or Chinese colonization in its territories. Russian subjects were confirmed in the privileges and rights previously enjoyed in regard to trade, travel and residence in all parts of Mongolia. In the protocol, also signed on November 3, 1912, the textual reference was to Mongolia, and not to Outer Mongolia only. Russian subjects were, in this Protocol, confirmed in the right "to import and export at all times all products and manufactures of Russia, Mongolia, China and other countries duty free, and to conduct free trade exempt from all duties and taxes."

Two months later, on January 11, 1913, a Treaty between Outer Mongolia and Tibet was signed. It is to be remarked that in this instrument the term Mongolia was used throughout. By this Treaty each country recognised that the other was an independent state, and they agreed to afford each other aid against dangers from without or within.

Notwithstanding Russia's recognition of the independence of "Mongolia" and promise of aid in the event of that independence being challenged, there was a strong anti-Russian party in Outer Mongolia. It speedily became obvious to the Mongols that Russia had no intention of aiding them to create a united Mongol state that would include Inner Mongolia. This realization caused a change of sentiment even among those who were inclined at first to entertain warm friendship for Russia. The anti-Russian sentiment was not lessened when it was announced that a Russo-Chinese Agreement had been signed on November 5, 1913, whereby, while China acknowledged the autonomy of Outer Mongolia, Russia recognized that Outer Mongolia was part of the territory of China. This Agreement dispelled forever the Pan-Mongolian dream that had inspired the original declaration of independence. In the Agreement Russia recognised that Outer Mongolia was under the suzerainty of China, and China, as already mentioned, recognised the autonomy of Outer Mongolia. China agreed not to intervene in the internal administration of Outer Mongolia; not to despatch troops thither, and to abstain from all colonization in the state. A Chinese representative could, however, reside in Urga, with the necessary staff and escort. Chinese agents could also be established in certain localities, if necessary, for the protection of the interests of Chinese subjects. On her part Russia agreed not to maintain troops, other than Consular guards, in Outer Mongolia; not to intervene in the internal administration, and to abstain from colonization. China declared her willingness to accept the good offices of Russia to establish relations with Outer Mongolia. The last article of the Agreement declared that the questions touching the interests of Russia, China and Outer Mongolia in the latter state would be the subject of future discussion. In notes exchanged by M. Krupensky, Russian Minister in Peking, and Mr. Sun Pao-chi, Chinese Minister for Foreign Affairs, the formal acknowledgment by Russia that Outer Mongolia was part of the territory of China was repeated; the arrangement that Russia, China and Outer Mongolia should take part in a future conference was confirmed, and it was declared that Outer Mongolia included the regions that had been under the jurisdiction of the Chinese Amban in Urga, the Tartar General in Uliassatai and the Chinese Amban in Kobdo. As the actual boundaries could not be defined they would be discussed at the tripartite conference to be held in the future.

This Russo-Chinese Agreement paved the way for the Kiakhta Conference which, after many vicissitudes, has just been brought to a successful conclusion, and in effect supplied the basis of the new Treaty. The first meeting of the Conference was held on September 8, 1914. China was represented by Mr. Pi Kuei-fang, ex-Governor of Heilungkiang, and Mr. Chen-lo, Minister Plenipotentiary to Mexico; Russia by Mr. Alexandre Miller, Consul General at Urga, and Outer Mongolia by Prince Fchakdourjav, Chief of Finance, and Shirnindandin, Vice-Chief of Justice. In many quarters it was feared that the Conference could not be successful as the Mongolian Government had not been a party to the Russo-Chinese Agreement, and bitterly resented the exclusion of Inner Mongolia from the autonomous state. There were certain questions in relation to the trading rights of the Powers that were expected to give trouble. On several occasions it seemed likely that the Conference would abruptly terminate without having accomplished the object for which it met; in fact the sittings were at one time suspended for a long period. That an actual deadlock was avoided was largely due to the tact and spirit of accommodation shown by the Chinese and Russian representatives.

The political status of Outer Mongolia, as already indicated, was defined in the Treaty in the terms employed in the Russo-Chinese Agreement. One of the first points taken up by the Conference was in relation to the title of the Hutukhta as head of the autonomous state. The Russian and Mongol delegates asked that his title should be Khan, meaning King, and to this the Chinese delegates consented, but the title was to be conferred by the President of the Republic of China. The question of calendars gave little difficulty, it being arranged that both the Chinese and Mongol calendars should be used side by side in dating Mongol documents. In the Russo-Chinese Agreement it had been agreed that there should be a Chinese Amban stationed at Urga, and that he should have a bodyguard. The number of soldiers to comprise this guard was fixed at 200, while that of the Russian Consul General was to be 150.

In reference to Customs duties, Russia had secured exemption, at present and in future, for Russian goods entering Mongolia, and China contended that Chinese goods should be treated in a similar manner. The Russian delegate opposed this, but eventually it was agreed that Chinese goods imported into Mongolia should be entitled to the same treatment as Mongol goods. Reciprocal treatment would be granted to Mongol goods imported into China. Chinese goods entering Mongolia from the north were to receive the same treatment as Russian goods.

Some difficulty was experienced in arriving at an agreement in regard to jurisdiction. The Chinese delegates wanted all cases between Chinese, or between Chinese and Mongols, to be tried by the Amban at Urga or his assistants. To this the Russian and Mongol representatives would not agree. It was finally agreed that cases should be tried by the defendant's court, and the law to be applied should be the law of the defendant's nation. Assessors of plaintiff's nationality would watch the cases. In regard to cases between Russians and Chinese they would be tried by a joint tribunal composed of Russians and Chinese. If Chinese were defendants the cases would be tried in Chinese courts in the presence of Russian assessors, and the judgment in each case would have to be signed by both judge and assessor. If Russians were the defendants the cases would be tried in Russian courts, but the Chinese authorities could send a representative to watch the proceedings. This representative would, however, have no voice in the judgment.

The question of the control of posts and telegraphs in Outer Mongolia was settled by handing over to the control of the autonomous Mongol Government all telegraph lines in the state, while control of the post offices, as heretofore, is to be exercised by China.

President Yuan Shih-kai has already issued an amnesty for those who were concerned in the secession of Outer Mongolia. The delimitation of the boundaries of the autonomous state, a task of considerable difficulty, will be entrusted later on to a joint Commission.

While it is too much to hope that the Mongolian Question has been definitely settled by the conclusion of the new Treaty, it will go far towards making a future settlement possible. The main point is that the status of Outer Mongolia has been settled.

The fears of Russia of a Chinese peaceful invasion of Siberia are relieved. Outer Mongolia has an opportunity to develop on its own lines, and China is confirmed in the possession of a portion of her traditional heritage that it seemed might be lost to her. Appended is a translation of the Treaty:—

SINO-RUSSO-MONGOLIAN AGREEMENT

(Translation from the French)

The President of the Republic of China, His Imperial Majesty the Emperor of all Russias, and His Holiness the Bogdo Djembzoun Damba Khoutoukhtou Khan of Outer Mongolia, animated by a sincere desire to settle by mutual agreement various questions created by a new state of things in Outer Mongolia, have named for that purpose their Plenipotentiary Delegates, that is to say:

The President of the Republic of China, General Py-Koue-Fang and Monsieur Tcheng-Loh, Envoy Extraordinary and Minister Plenipotentiary of China to Mexico;

His Imperial Majesty the Emperor of all Russias, His Councillor of State Alexandre Miller, Diplomatic Agent and Consul-General in Mongolia; and His Holiness the Bogdo Djembzoun Damba Khoutoukhtou Khan of Outer Mongolia, Erdeni Djonan Beise Shirnin Damdin, Vice-Chief of Justice, and Touchetou Tsing Wang Tchakdourjab, Chief of Finance, who having verified their respective full powers found in good and due form, have agreed upon the following:

Article I.

Outer Mongolia recognizes the Sino-Russian Declaration and the Notes exchanged between China and Russia of the 5th day of the 11th month of the 2nd Year of the Republic of China, 23rd October, 1913.

Article II.

Outer Mongolia recognizes China's suzerainty. China and Russia recognize the autonomy of Outer Mongolia forming part of Chinese territory.

Article III.

Autonomous Mongolia has no right to conclude international treaties with foreign powers respecting political and territorial questions.

As respects questions of a political and territorial nature in Outer Mongolia, the Chinese Government engages to conform to Article II of the Note exchanged between China and Russia on the 5th day of the 11th month of the 2nd Year of the Republic of China, 23rd October, 1913.

Article IV.

The title: "Bogdo Djembzoun Damba Khoutoukhtou Khan of Outer Mongolia" is conferred by the President of the Republic of China. The calendar of the Republic as well as the Mongol calendar of cyclical signs are to be used in official documents.

Article V.

China and Russia, conformably to Articles II and III of the Sino-Russian Declaration of the 5th day of the 11th month of the 2nd Year of the Republic of China, 23rd October, 1913, recognize the exclusive right of the autonomous Government of Outer Mongolia to attend to all the affairs of its internal administration and to conclude with foreign powers international treaties and agreements respecting questions of a commercial and industrial nature concerning Autonomous Mongolia.

Article VI.

Conformably to the same Article III of the Declaration, China and Russia engage not to interfere in the system of autonomous internal administration existing in Outer Mongolia.

Article VII.

The military escort of the Chinese Dignitary at Urga provided for by Article III of the above-mentioned Declaration is not to exceed two hundred men. The military escorts of his Assistants at Ouliassoutai, at Kobdo, and at Mongolian-Kiachta are not to exceed fifty men each. If, by agreement with the Autonomous Government of Outer Mongolia, Assistants of the Chinese Dignitary are appointed in other localities of Outer Mongolia, their military escorts are not to exceed fifty men each

Article VIII.

The Imperial Government of Russia is not to send more than one hundred and fifty men as consular guard for its representative at Urga. The military escorts of the Imperial consulates and vice-consulates of Russia, which have already been established or which may be established by agreement with the Autonomous Government of Outer Mongolia, in other localities of Outer Mongolia, are not to exceed fifty men each.

Article IX.

On all ceremonial or official occasions the first place of honour is due to the Chinese Dignitary. He has the right, if necessary, to present himself in private audience with His Holiness Bogdo Djembzoun Damba Khoutoukhtou Khan of Outer Mongolia. The Imperial Representative of Russia enjoys the same right of private audience.

Article X.

The Chinese Dignitary at Urga and his Assistants in the different localities of Outer Mongolia provided for by Article VII of this agreement are to exercise general control lest the acts of the Autonomous Government of Outer Mongolia and its subordinate authorities may impair the suzerain rights and the interests of China and her subjects in Autonomous Mongolia.

Article XI.

Comformably to Article IV of the Note exchanged between China and Russia on the 5th day of the 11th month of the 2nd Year of the Republic of China (23rd October, 1915), the territory of autonomous Outer Mongolia comprises the regions which were under the jurisdiction of the Chinese Amban at Ourga, or the Tartar-General at Ouliassoutai and of the Chinese Amban at Kobdo; and connects with the boundary of China by the limits of the banners of the four aimaks of Khalkha and of the district of Kobdo, bounded by the district of Houloun-Bouire on the East, by Inner Mongolia on the South, by the Province of Sinkiang on the South-west, and by the districts of Altai on the West.

The formal delimitation between China and autonomous Mongolia is to be carried out by a special commission of delegate's of China, Russia and autonomous Outer Mongolia, which shall set itself to the work of delimitation within a period of two years from the date of signature of the present Agreement.

Article XII.

It is understood that Customs duties are not to be established for goods of whatever origin they may be, imported by Chinese merchants into autonomous Outer Mongolia. Nevertheless, Chinese merchants shall pay all the taxes on internal trade which have been established in autonomous Outer Mongolia and which may be established therein in the future, payable by the Mongols of autonomous Outer Mongolia. Similarly the merchants of autonomous Outer Mongolia, when importing any kind of goods of local production into "Inner China," shall pay all the taxes on trade which have been established in "Inner China" and which may be established therein in the future, payable by Chinese merchants. Goods of foreign origin imported from autonomous Outer Mongolia into "Inner China" shall be subject to the customs duties stipulated in the Regulations for land trade of the 7th year of the Reign of Kouang-Hsu (1881).

Article XIII.

Civil and criminal actions arising between Chinese subjects the said staff are to be granted for their escorts. residing in Autonomous Outer Mongolia are to be examined and adjudicated by the Chinese Dignitary at Urga and by his Assistants in the other localities of Autonomous Outer Mongolia. Article XIV.

Civil and criminal actions arising between Mongols of Autonomous Outer Mongolia and Chinese subjects residing therein are to be examined and adjudicated conjointly by the Chinese Dignitary at Urga and his Assistants in the other localities of Autonomous Outer Mongolia, or their delegates, and the Mongolian Authorities. If the defendant or accused is a Chinese subject and the claimant or the complainant is a Mongol of Autonomous Outer Mongolia, the joint examination and decision of the case are to be held at the Chinese Dignitary's place at Niga and at that of his Assistants in the other localities of Autonomous Outer Mongolia; if the defendant or the accused is a Mongol of Autonomous Outer Mongolia and the claimant or the complainant is a Chinese subject, the case is to be examined and decided in the same manner in the Mongolian yamen. The guilty are to be punished according to their own laws. The interested parties are free to arrange their disputes amicably by means of arbitrators chosen by themselves.

Article XV. Civil and criminal actions arising between Mongols of

Autonomous Outer Mongolia and Russian subjects residing therein are to be examined and decided comformably to the stipulations of Article XVI of the Russo-Mongolian Commercial Protocol of 21st October, 1912.

Article XVI.

All civil and criminal actions arising between Chinese and Russian subjects in Autonomous Outer Mongolia are to be examined and decided in the following manner: in an action wherein the claimant or the complainant is a Russian subject and the defendant or the accused is a Chinese subject, the Russian Consul personally or through his delegate participates in the judicial trial, enjoying the same rights as the Chinese Dignitary at Urga or his delegate or his Assistants in the other localities of Autonomous Outer Mongolia. The Russian Consul or his delegate proceeds to the hearing of the claimant and the Russian witnesses in the court in session, and interrogates the defendant and the Chinese witnesses through the medium of the Chinese Dignitary at Urga or his delegate or of his Assistants in the other localities of Autonomous Outer Mongolia; the Russian Consul or his delegate examines the evidence presented, demands security for "revindication" and has recourse to the opinion of experts, if he considers such expert opinion necessary for the elucidation of the rights of the parties, etc; he takes part in deciding and in the drafting of the judgment, which he signs with the Chinese Dignitary at Urga or his delegate or his Assistants in the other localities of Autonomous Outer Mongolia. The execution of the judgment constitutes a duty of the Chinese authorities.

The Chinese Dignitary at Urga and his Assistants in the other localities of Autonomous Outer Mongolia may likewise personally or through their delegates be present at the hearing of an action in the Consulates of Russia wherein the defendant or the accused is a Russian subject and the claimant or the complainant is a Chinese subject. The execution of the judgment constitutes a duty of the Russian authorities.

Article XVII.

Since a section of the Kiachta-Urga-Kalgan telegraph line lies in the territory of Autonomous Outer Mongolia, it is agreed that the said section of the said telegraph line constitutes the complete property of the Autonomous Government of Outer Mongolia. The details respecting the establishment on the borders of that country and Inner Mongolia of a station to be administered by Chinese and Mongolian employees for the transmission of telegrams, as well as the questions of the tariff for telegrams transmitted and of the apportionment of the receipts, etc., are to be examined and settled by a special commission of technical delegates of China, Russia and Autonomous Outer Mongolia. Article XVIII.

The Chinese postal institutions at Urga and Mongolian Kiachta remain in force on the old basis.

Article XIX.

The Autonomous Government of Outer Mongolia will place at the disposal of the Chinese Dignitary at Urga and of his Assistants at Ouliassoutai, Kobdo and Mongolian-Kiachta as well as of their staff, the necessary houses, which are to constitute the complete property of the Government of the Republic of China. Similarly, necessary grounds in the vicinity of the residences of

Article XX.

The Chinese Dignitary at Urga and his Assistants in the other localities of Autonomous Outer Mongolia and also their staff are to enjoy the right to use the courier stations of the Autonomous Mongolian Government comformably to the stipulations of Article XI of the Russo-Mongolian Protocol of 21st October, 1912.

Article XXI.

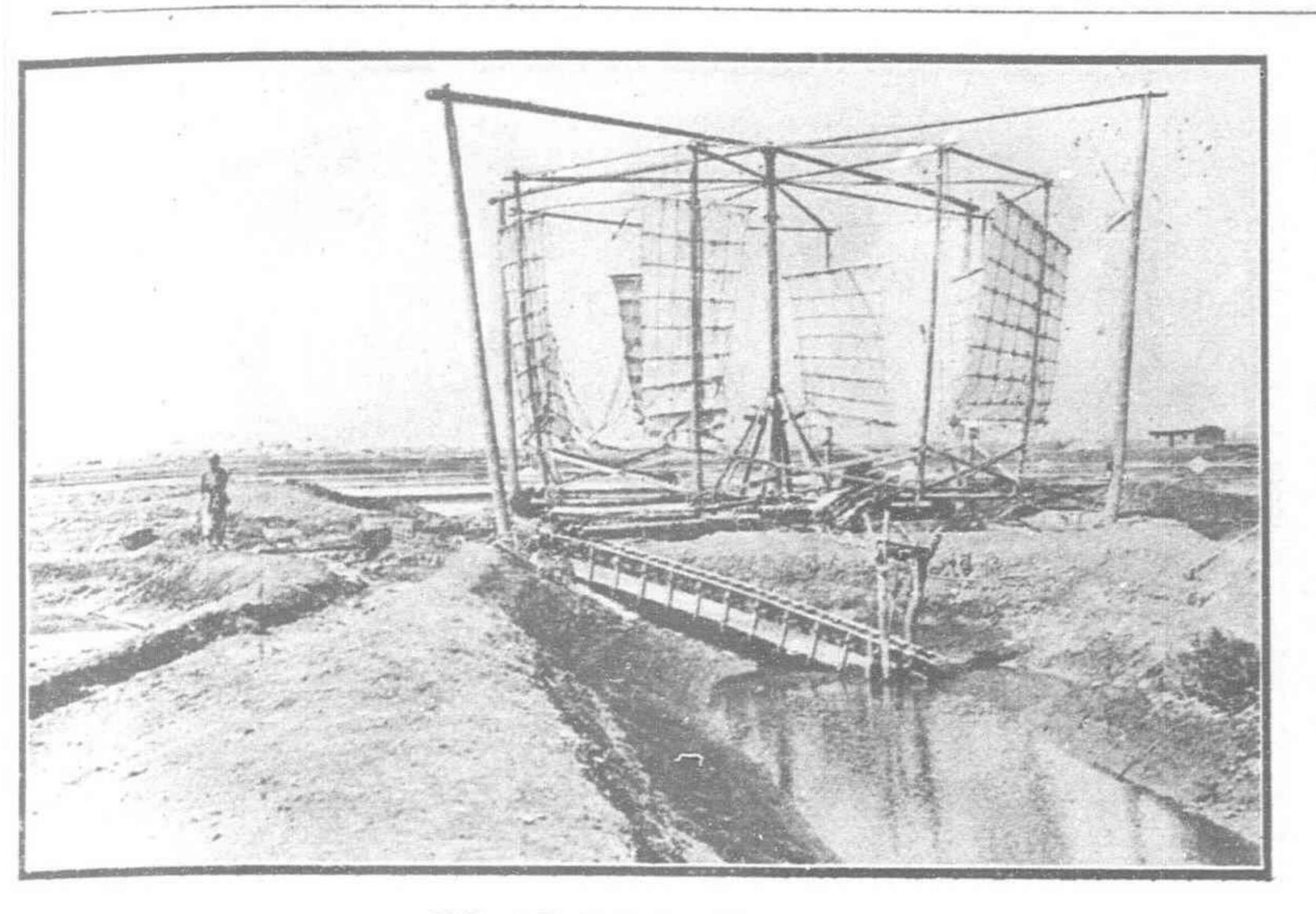
The stipulations of the Sino-Russian declaration and the Notes exchanged between China and Russia of the 5th day of the 11th month of the 2nd Year of the Republic of China, 23rd October, 1913, as well as those of the Russo-Mongolian Commercial Protocol of the 21st October, 1912, remain in full force.

Article XXII.

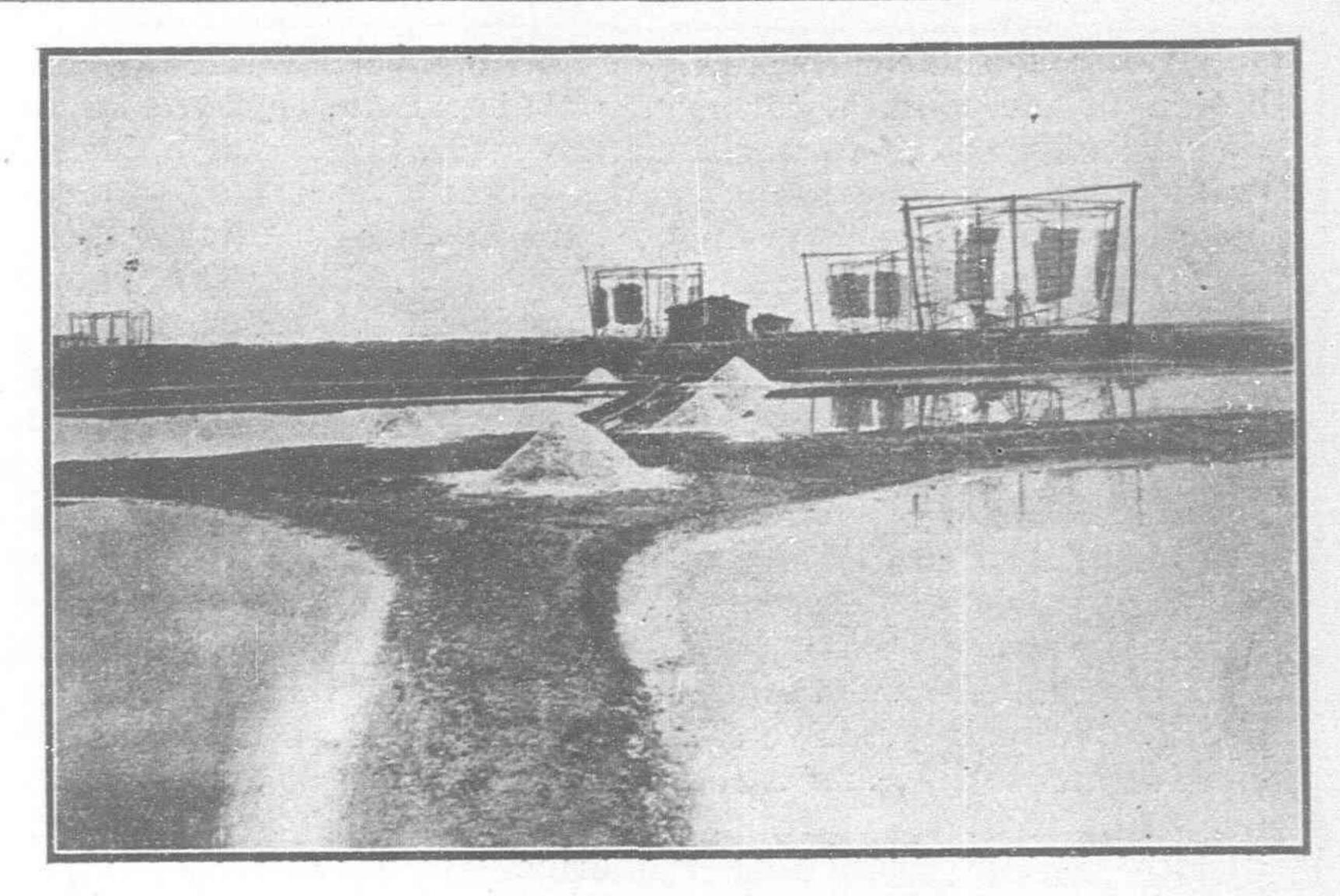
The present Agreement drawn up in triplicate in Chinese, Russian, Mongolian and French languages, comes into force from the day of its signature. Of the four texts which have been duly compared and found to agree, the French text shall be authoritative in the interpretation of the Present Agreement.

Done at Kiachta the 7th day of the Sixth Month of the Fourth Year of the Republic of China, corresponding to the Twenty-Fifth of May, Seventh of June, One Thousand Nine-

hundred Fifteen.







Secondary or Crystallizing Pond

NOTES ON SEA-SALT MANUFACTURE IN NORTH CHINA

(Communicated by Courtesy of the Chinese Salt Co., Ltd., Peking)

The following are: (a.) Notes made from personal observation and from information supplied at the T'ang-ku salt pans on the Government Railway south of Tientsin and opposite the Taku forts. They illustrate a typical method of salt-production in the Ch'ang-lu area, second only in importance to that of Newchwang (Sheng-ching) in Manchuria. (b.) Notes made by Sir Alex. Hosie on salt manufacture in the Newchwang district.

T'ang-ku comes under the sub-district of Ning-ho, one of the ten divisions of the Ch'ang-lu area. The salt of the Ch'ang-lu and Newchwang areas is produced solely by sun-evaporation of brine in shallow ponds along the sea-coast. The salt thus produced is generally considered by the Chinese to be of the

best quality, and the greater part is consumed in the provinces of Chihli and Honan. The district is divided up into a large number of small properties, each having an area of approximately 100 acres. As a rule, each property is worked by a Chinese company or partnership.

Conclusions.—North China sea-salt is obtained by sun-evaporation of sea-brine, followed by open-air crystallisation of the concentrated liquor in special ponds. As against a mechanical process, the absence of fuel-cost in this process far more than counterbalances its extra rent-cost, so that the over-all production cost is less than a half of that obtainable by any process in which panevaporation with coal is used.

This sun-evaporated salt is produced from sea-water at about 3s 6½d per ton. The product is remarkably free from impurity.

The disadvantages of this sun-evaporation process are:—
(1.) The salt inevitably contains mechanical impurities. (2.) Production is spread over a very considerable area. This entails costly supervision for prevention of smuggling. (3.) Only one quality of salt is produced.

It is probable that the advantages, chiefly aesthetic, obtained by the utilisation of any mechanical process for evaporating sea-salt, are in China not such as to counterbalance the lower cost of the existing process of manufacture.

In North China the obtaining of large quantities of approximately saturated brine is, on account of adverse atmospheric conditions, impossible for five months in the year. The cost of production by any mechanical process would, therefore, be nearly double the average cost obtained with a plant running continuously, that is to say, the cost of production by the Hodgkinson process would, in North China, probably be increased to at least three times that of the existing process, even were a Hodgkinson plant used as a crystallising accessory only to the present process.

The writer is, therefore, strongly of opinion that it is absolutely useless to endeavour to obtain the adoption of the Hodgkinson process for sea-salt manufacture in either the Ch'ang-lu or

Newchwang districts.

This report has, of course, no reference to the additional districts mentioned in App. 1.

Each property has a canal, often several miles in length, connecting it with the sea. About four-fifths of the land is divided into primary evaporating ponds of, roughly, 100 yards square, and the remaining one-fifth into secondary evaporating ponds of, roughly, 30 yards area.

Primary Ponds.—The seawater is pumped by wooden elevators worked by circular horizontal-sail windmills (of which there are usually two or three on each property) to a level of about 4 ft. above the canal, and run into the primary ponds, to a depth

of about 6 inches. These ponds are interconnected by small canals. When the brine has become concentrated to sufficient strength it is run into the secondary or crystallising ponds, whose level is set a foot or so below that of the others. The density of the brine is tested by means of seeds of the lotus. When the concentration is such that these float in the solution it is considered strong enough for the secondary or crystallising stage.

Secondary Ponds.—In addition to being smaller in area, these differ from the primary ponds in being of less depth, and in having their clay bottoms carefully rolled as hard as possible at the beginning of the season.



Salt in Process of Crystallization

When a sufficiently thick deposit has been formed at the bottom of any pond, a workman, starting at the centre, scrapes the bottom, working outwards spirally. He finishes at a corner of the pond where he heaps up the coarsely crystalline product in order to allow it to drain. At the edges of the pond there is formed a small deposit of finely crystalline bitter salt, called "hsiao," which is raked up to the sides of the ponds and rejected.

When drained and dry the salt is collected in one large heap near the canal, and is then ready for transfer to the Government depot in boats, and for the market.

Conditions of Manufacture.—These ponds turn out salt in the five months of March, April, May, June and September, only. Through July and August the shade temperatures in the district often average between 95-100° Fahr. (see App. 2), but there is a heavy rainfall, and the atmosphere is near water saturation point. Through these two causes, which result in dilution of the concentrated brine, and a retarding of evaporation, it is found impossible to obtain crystallisation of the salt. It appears likely that the serious dilution of the brine which must take place during the heavy rains, which sometimes amount to several inches in a few hours, must be the chief disturbing factor, and it would appear advisable to have some means by which in any mechanical evaporating process in the tropics the open pans may be temporarily protected from rain.

In September, on account of the atmospheric moisture and decreasing strength of the sun's rays, the deposition of salt does not begin until about noon.

From October to the end of February the sun's rays are not strong enough to assist evaporation. The rainfall is very slight, but the cold is intense, and even the open sea in the neighbourhood becomes frozen. Though no crystallisation is obtained, there is a steady concentration of the brine, both in the canals and in the ponds.

March, April, and May are extremely dry throughout North China, and it is during these months that the great bulk of the salt is manufactured. Evaporation is then so rapid that the men are kept at work both day and night. The beds of the crystallising tanks are beaten and rolled to a slightly conical shape with a slope towards the edges. This is said to hasten crystallisation. The beating of the beds prevents contamination of the salt with the earth from the bottom of the bed, and, further, prevents the brine from sinking into the substratum, a serious source of loss if tamping is imperfectly carried out.

During the last stages of crystallisation the brine solution is kept in motion with wooden rakes. As crystallisation proceeds the salt is raked into a conical heap, and is allowed to drain. The salt so produced is often of a pure white colour, and remarkably free from mechanical impurities.

When dry it is transported by coolies to boats, in which it is carried to the Government depot near T'ang-ku station.

Output. Government Supervision and Marketing.—The Government depot is surrounded by a barrier, whose entrances are guarded by armed sentries. There are 46 salt properties in the T'ang-ku district. To each property is allotted an area within the depot upon which its salt is to be heaped. These heaps amount in September to, roughly, five to nine thousand bagsfull of salt (400 catties of salt to each bag). The total production from these properties was stated to amount annually to about 250,000 bags, or, roughly, 60,000 tons.

The salt prices for each year are fixed beforehand by the foremen of the property, in consultation with the salt merchants. After the price has been arranged the salt merchants apply to the Government for passes authorising them to sell fixed quantities of salt. Upon issue of these licenses the merchants are supposed to pay the amount of salt tax due upon the amount licensed. Upon showing his certificate at the salt depot, and satisfying the demands of the seller, the merchant is able to withdraw his salt from the seller's heap. It is put in bags alongside the heap, weighed, stamped with the salt official's seal, and loaded into trucks for transport to those districts in which its sale is authorised. A photograph shows salt packed in matting packages and loaded upon trucks. The use of matting for packages is now prohibited, sacks only being used in this district.

Weak Points in the Method of Production.—The weak points in the existing process appear to be:—(1) That production ceases entirely through five months of the year, because the fine adjustment of conditions required for the crystallisation stage are not obtainable. (2) The cost of rent and canal repairs, often constituting two-thirds of the cost of production, runs throughout the year, and has to be paid for out of production in five months only. (3) Production is distributed over a vast area, connected both inland and to the sea with easy means of transport. Smuggling can therefore be carried on without very great difficulty, and the cost of guarding against this source of loss of revenue is far greater than it would be were the concentrated brine brought to a small area for final crystallisation.

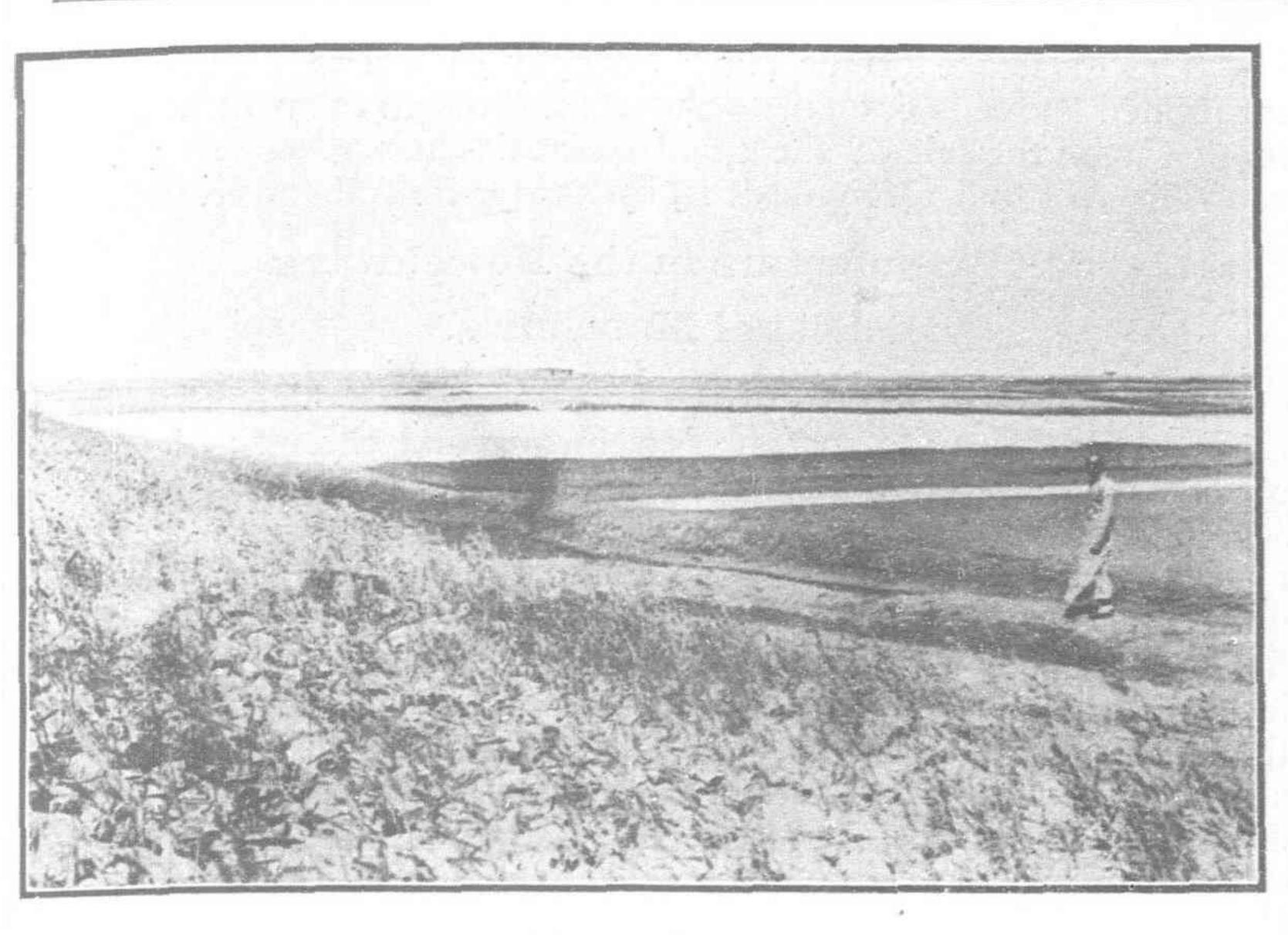
Cost of Production .- The uniform price fixed for 1913 has been 40 Kunfa Taels per Ying of one hundred 400 catty bags of salt, having a theoretical content of 360 catties only, i.e., the sellers are paid for 360 catties only, a 11.5% wastage allowance being made by the producer. The purchase price is paid on 360 catty content; excise-duty, however, is paid on the full weight of 400 catties of salt. The Kunfa Tael is exchanged at fixed price of 1,800 coppers, of which about 130 are normal exchange for the Mexican dollar, which is the basis of foreign monetary dealings in China. The price of 40 Taels per 400 X 100 catties therefore works out at 40 X 1,800 over 400 X 100, i.e., 18 coppers per catty, or 18 divided by 130, i.e., .14 dollar cents per catty. During the last five months the Kunfa Tael has varied between 3s 1d and 2s 8d. A value of 2s 1od may be taken as safe and accurate enough for our purposes. One Ying of salt weighs 23.89 tons, which is considered by the producers to cost approximately 30 Taels. Sir Richard Dane informs the writer that in the Newchwang district this year, on account of the dryness of the season, the cost of production has been lower even than this. The cost of production is therefore 30 x 2s 10d for 23.89 tons or 85/23.89, approximately 3s 61d per ton during a period of high exchange, and as much as 25% less during a period of low exchange.

The price of 40 Taels per Ying is considered by the manufacturers to be distinctly good, on account of their profit of 10-15 Taels obtainable on the manufacture. Prices of salt have varied greatly in the district. About 50 years ago the price was as low as 8 Taels per Ying, and during the Boxer period, in 1900, it rose to 80 and 100 Taels per Ying. The average in recent years has been from 35 to 40 Taels.

The following were given as production-costs for a property producing 4,000 bags, or 40 Ying, annually of salt. The figures have been checked on the spot, and are probably approximately correct:—

	Taels				81
Rent	300				
Labour	140				
Transport	120				
Canal Repairs	300				
Pumping	50				
Tools	45				
	-				
Profit available	955	6 7 1	T'1-		4 **
Tronic available	045=1	10,1	1 aeis	per	Ying
Selling PriceTls.	,600= Z	40	5.5	2,	22

In view of the fact that the Hodgkinson process claims to produce salt at a little under four shillings per ton from fairly concentrated brine, it is obviously quite impossible for it to compete throughout with the sun-evaporation process, which has an over-all cost of, say, 3s 6½d per ton for treating a solution of more than four times as much water-content. Seeing, however, that the Chinese process is carried out in two operations—the preliminary concentration and final crystallisation—it would appear desirable to discover whether the European method of final crystallisation is capable of replacing the Chinese method, and whether such substitution would render production more expensive, and, if so, whether the greater expense is likely to be counterbalanced by advantages:

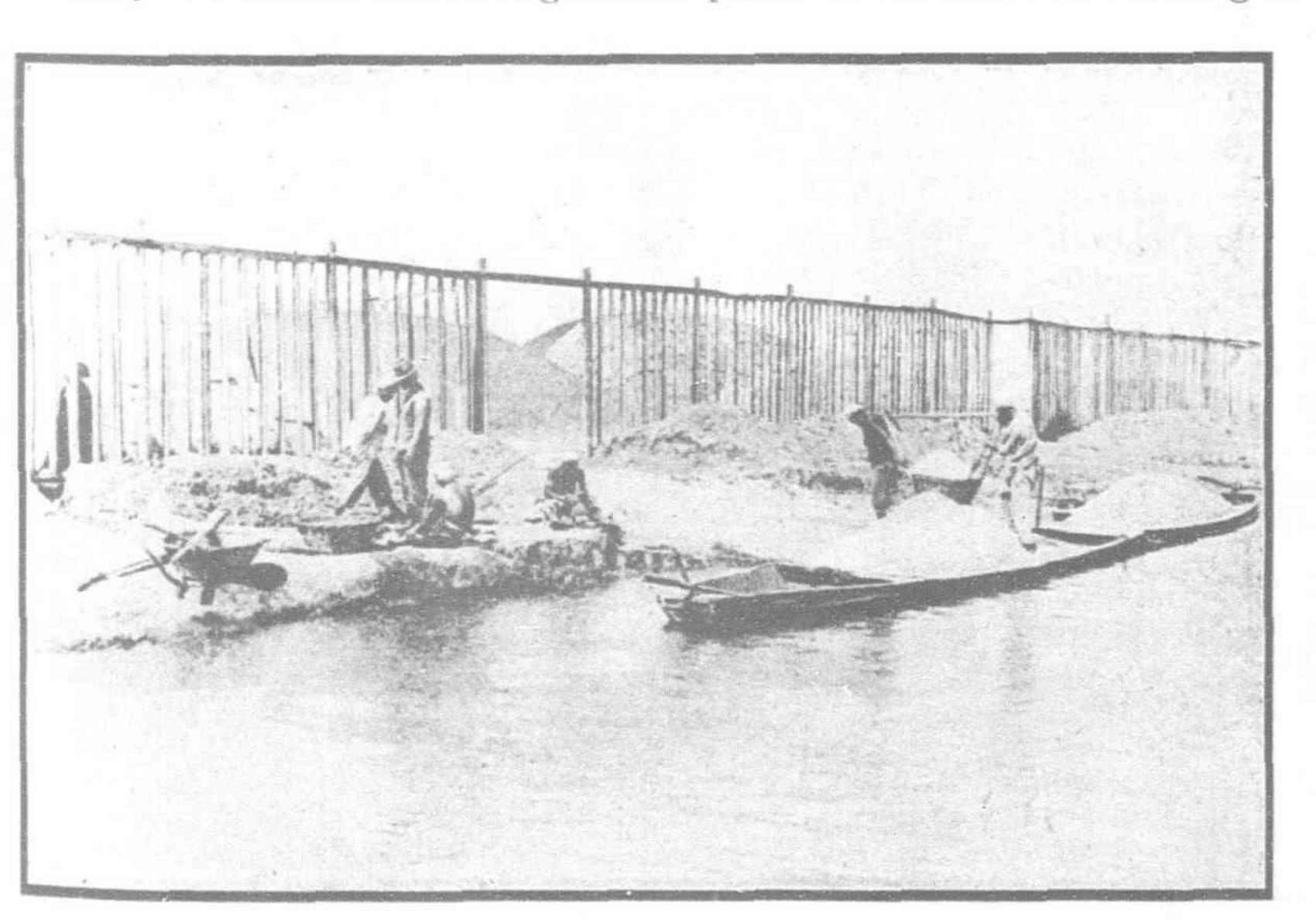


Primary Ponds

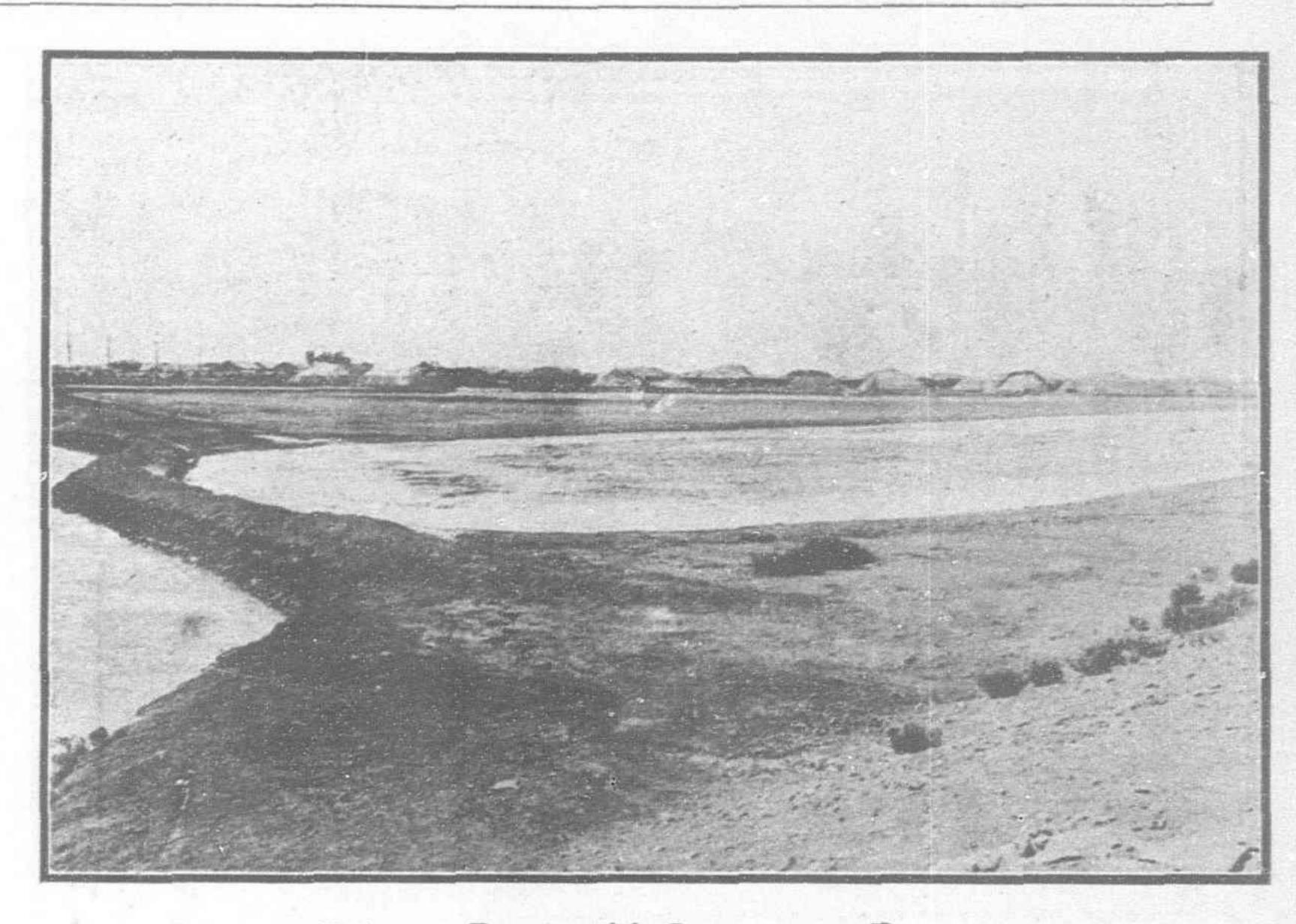
(1) In increased productiveness of a given area. (2) In purity of the product. (3) In prevention of smuggling. (4) In ease of collection of revenue.

The annual production of the above property is about 40 Ying, or 40 × 23.81 = 952 tons for five months. It is obvious that it would be uneconomical to install a Hodgkinson plant, whose normal production is 17,000 tons per 5 months, for a property of smaller than, say, 17 times the size of this. Assuming, however, that an amalgamation of properties is possible, in view of the fact that a Hodgkinson plant is exceedingly compact, there will be an increase in area for primary evaporation of about one-fifth—the area previously occupied by the crystallising ponds—and a consequent economy in rent of about one-fifth. On the above property this would amount, at most, to about 60 Taels on an output of 23.81 X40, or 952 tons, or say 6.3 Tael cents per ton. Such a property would of necessity have its crystallising centre as near as possible to the Government depot, so that it should be possible to economise on transport as well as labour-much of which is normally engaged in carrying salt from the ponds to the boats. It is possible that economy to the extent of, say, \$120 is obtainable by this process, i.e. 12.6 Tael cents per ton. The items of canal repairs, pumps and tools would, in all probability, remain at the same level. The Hodgkinson process can, therefore, economise on cost if worked with the existing process on condition that the final crystallisation by it costs something less than 19 Tael cents or, say, 2d per ton, a condition which is manifestly impossible of attainment.

Further, the cold of winter, freezing all brine at normal sea-concentration, and the excessive rains of summer, would be likely to cause the Hodgkinson plant to be idle for as long a



Salt Entering the Depot



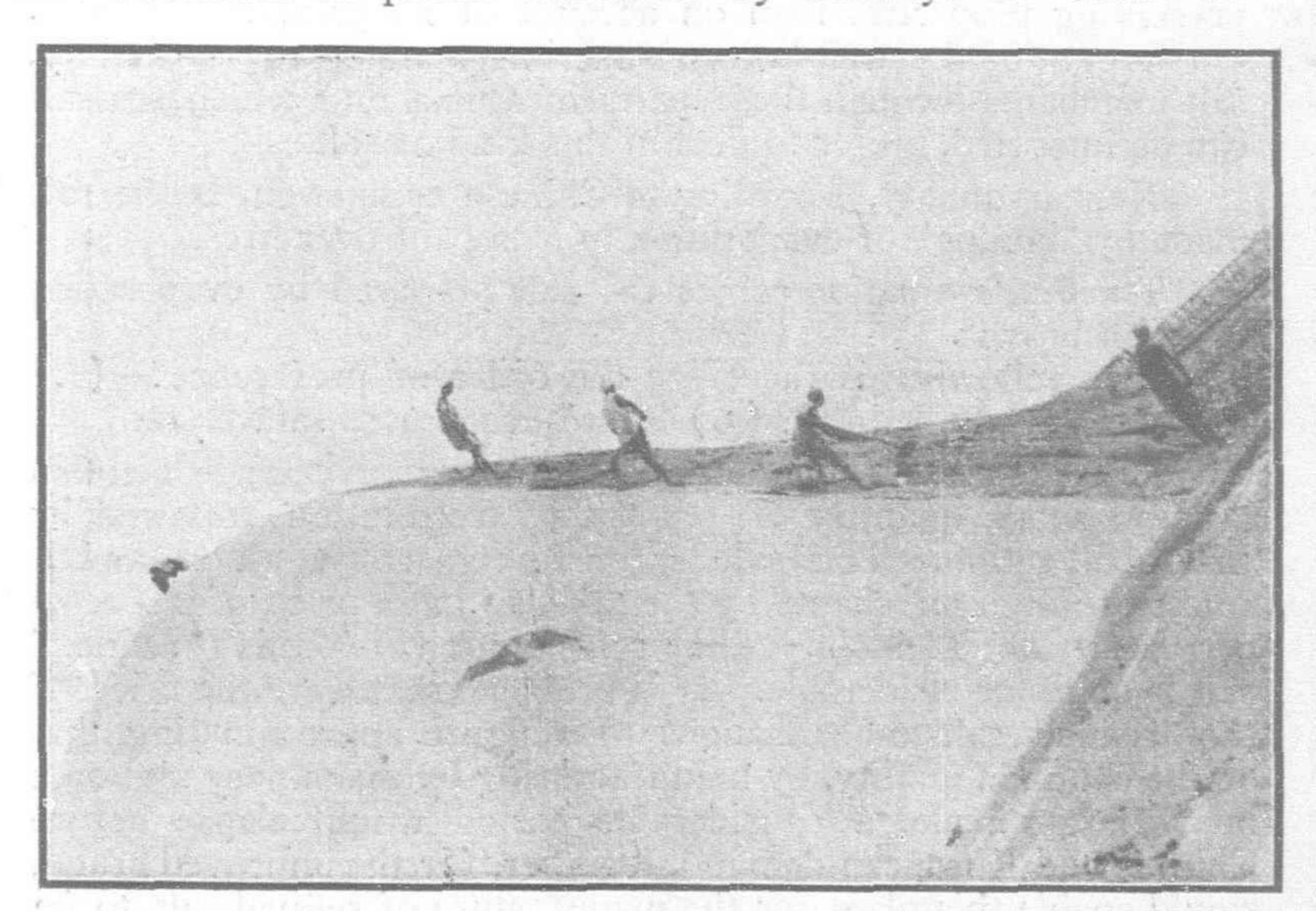
Primary Ponds with Government Depot

period as the ponds are inactive at present. The cost of evaporation would, therefore, on account of amortisation and supervision charges rise to about 4/- per ton. The cost of coal per ton would of course remain stationary, and bring the total cost to, say, 5s per ton. Any mechanical process therefore must add very nearly 5s (less 2d) per ton to the existing cost per ton. This is obviously due to the fact that the only costs in the existing preliminary process are pumping and rent, the water being evaporated almost free of cost.

In the existing Chinese process there is no cost for coal, depreciation, sinking-fund, rates, and taxes, etc., and the cost of supervision is infinitesimal, so that it may be taken for granted that no mechanical process can improve matters in the least, as regards cost of production. The existing process takes sea-water, concentrates it to one-fifth strength and crystallises out the salt at a much cheaper rate than a mechanical process can simply crystallise out the salt.

As against the advantages of concentrating production into a small area and producing a cleaner product by such a process as Hodgkinson, it would doubtless be urged that it would be quite possible to have the concentrated brine from a large area run into a comparatively small Government-supervised crystallising area at present, and that if increased purity is desired it would be easy to have cement or even iron bottoms to the existing crystallising ponds. As regards the fineness—table, fishery, etc.—of the salt produced, it may be pointed out that to the Chinese nation as a whole, in its present state of refinement and cheapness of labour, it is practically immaterial whether salt be supplied as rock-salt or table-salt.

Chinese Salt Consumption.—Practically the whole of the salt consumed in places accessible by railways in China is



Heaping the Salt



Weighing and Bagging

sun-evaporated salt, except in Yunnan where the importation of salt, even Chinese, by railway is prohibited. It is impossible to obtain statistics as to the relative quantities of sea, "boiled" and

"board" salt consumed in China, but in view of the fact that sea-salt has no access to Yunnan and Szechuen, which together have a population of, say, 50 million—one-eighth of that of China—the sea-salt consumed cannot be more than, say, 85% of the whole.

There can be no doubt that, in view of the fact that railways are being built from the sea inland, and are not facilitating transport from the "boiled" salt district, the area consuming sea-salt is, and is likely to be, on the increase.

It is stated by Chinese in Chihli that Chinese throughout China prefer salt prepared from brine by sunevaporation. This salt is usually cleaner before contamination or adulteration than

any other, is very salt in taste, and is free from bitterness. So high is this reputation that in South Yunnan, two hundred miles from the sea, smuggled sea-salt is preferred to the clean well-salt of Western Yunnan, more on account of its superior saltness and preserving properties than on account of its greater cheapness. On account of the well-known superiority and ready saleability, salt merchants through those parts of China into which sea-salt can be imported, prefer to deal in this kind of salt.

Next in quality, according to Chinese estimation, is the salt made by "boiling" or evaporation in iron pans over fires.

Third in estimation comes the salt prepared by evaporating brine on boards.

The following is therefore the order of preference:—(1.) Sea-salt, (2.) Boiled-salt, (3.) Board-evaporated salt.

Refined salt Consumption.—The Chinese merchants in Tientsin refine a small quantity of sea-salt by re-solution followed by careful filtration. This salt is for foreign consumption, and is sold to foreign merchants by the salt-guild at a price of 18 cents per catty at Tientsin. The consumption of this "refined" salt is quite inconsiderable. It is probable that were the price of this refined salt to be brought to a figure approximating that of the common quality, by manufacturing by machinery and on a much larger scale, a considerable period would elapse before Chinese and European demand, together, for the improved brand, would enable this plant for the manufacture of refined salt to be kept continuously in operation by the demand.

The existence of the small quantity of native refined salt mentioned above is due not to the small profit to be made in open market upon the sale of the small quantities consumed, so much as to the fact that foreign salt is, by treaty, contraband in China.

Salt Manufacture in the Newchwang District of Manchuria.*

In the low-lying lands of the Liao-tung Peninsula, and more especially between the port of Newchwang and the city of Kaip'ing Hsien, where a number of creeks penetrate inland from the sea, much of the ground is given up to the manufacture of salt by sun evaporation. Previous to visiting these salt-fields I was under the impression that sea-water was simply run on to the fields and allowed to stand there until the water dried up and left a deposit of salt; but I found on personal examination that the process is much more elaborate and is carried on not without a certain amount of rude science. Nearest to the creek or open ditch leading from the creek-these ditches ramify over the salt-fields—are five large square or oblong plots of land (Shui Chuan) sunk in the 'soil, each carefully dyked and capable of containing water two to three feet deep. Small openings, which can readily be closed by pieces of wood, allow the water to run from the first plot or tank into which the sea-water is baled from the creek or ditch to the second, third, fourth and fifth tanks. Next to these tanks are eight similar but smaller tanks (Lu

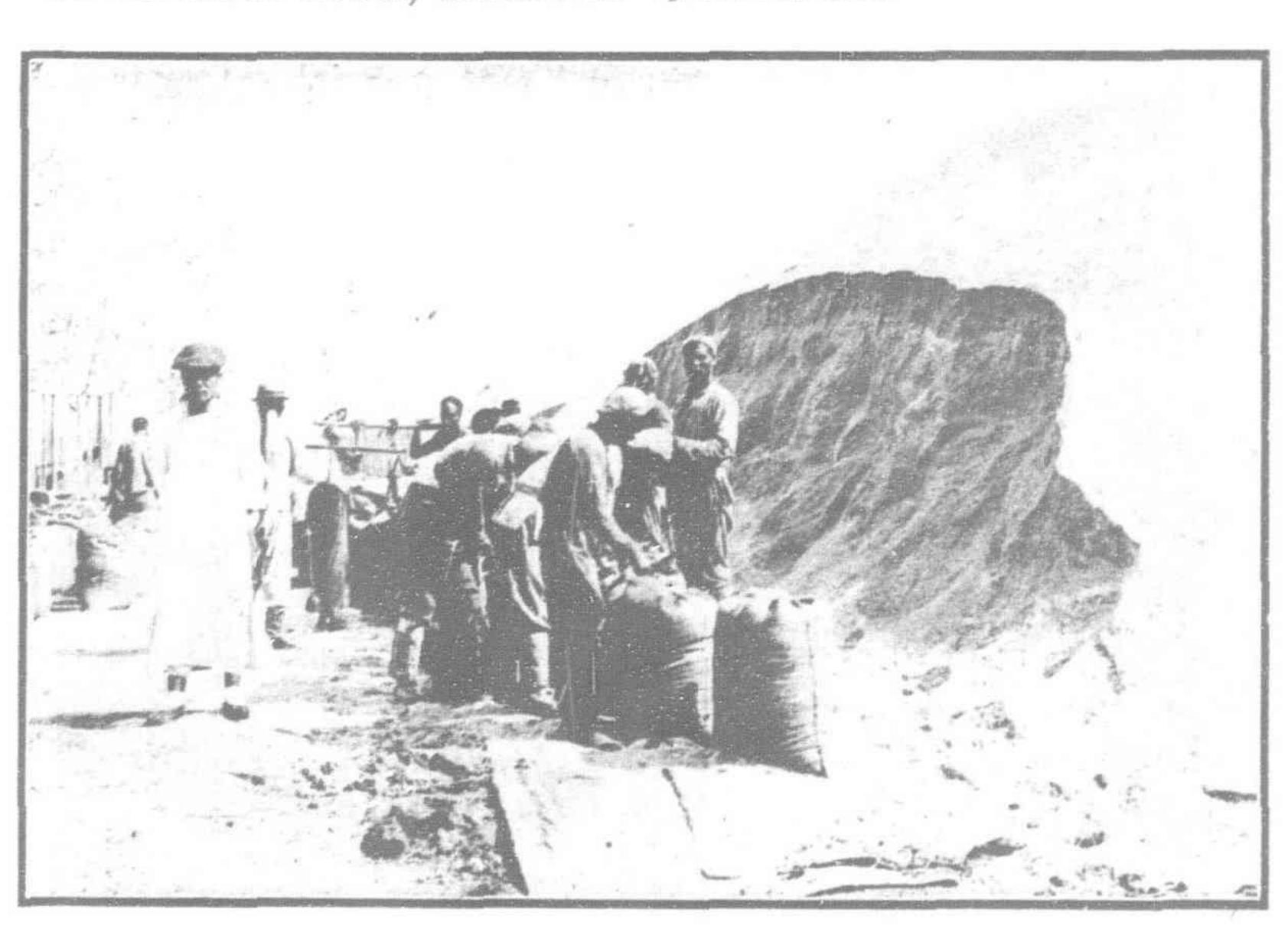
Tang), and beyond six and sometimes eight similar but smaller tanks (Yen Chih), in the last of which the salt ultimately crystallises. The three sets of tanks all communicate with each other by means of small openings in the dykes, which can be closed at will. In the first two sets of tanks the beds or floors are flat, but in the last set, which are shallower, they rise gradually from edge to centre. In the end of the autumn the beds of the last set of tanks (Yen Chih) are beaten hard by wooden mallets—the soil is clay—and sea-water is run into them through the other sets of tanks. That is allowed to remain frozen over winter, and in spring the beds of the Shui Chuan and Lu Tang are levelled



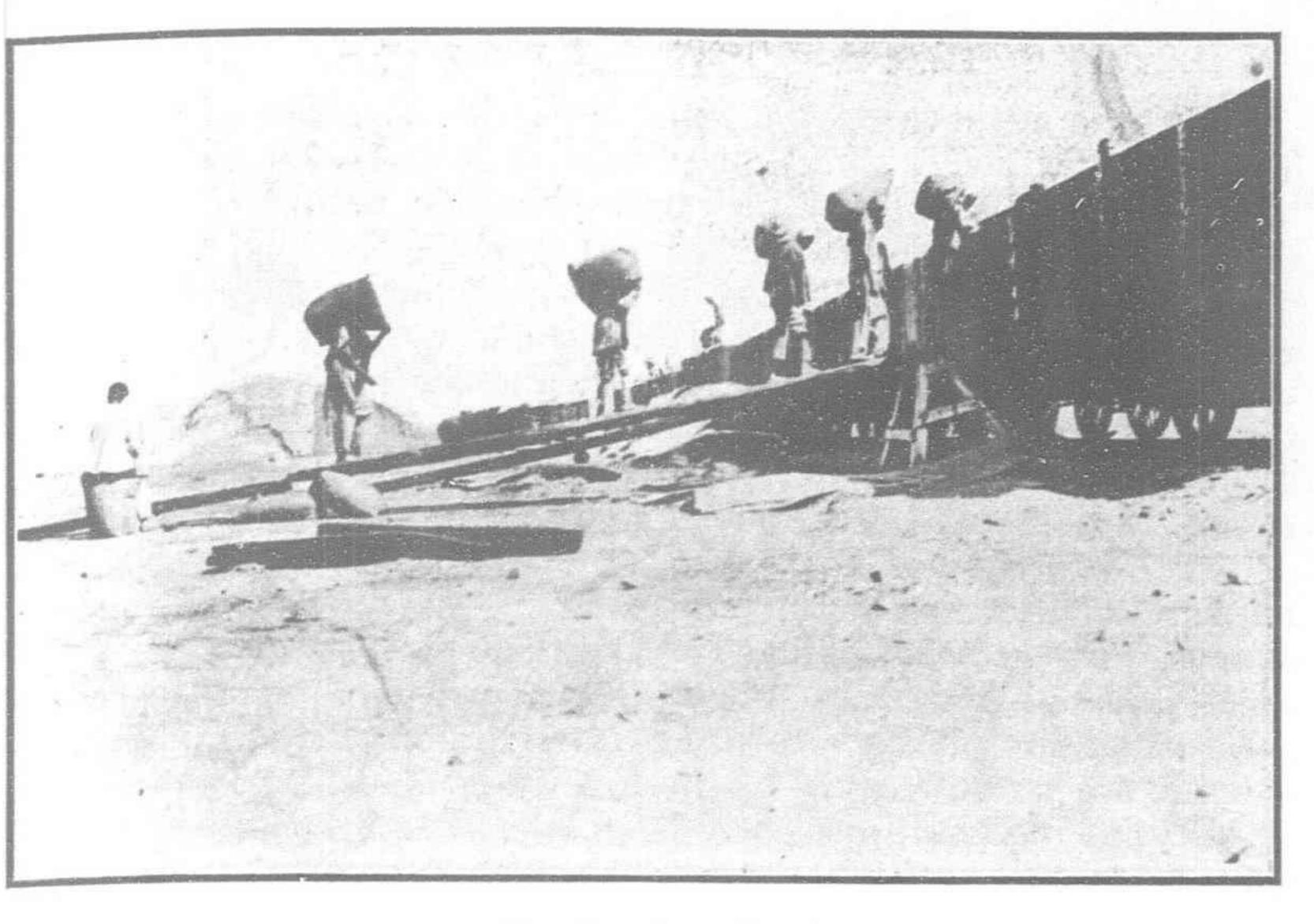
Weighing, Bagging and Sealing

and beaten hard. When the water thaws in the Yen Chih it is carried back by a small drain to, and stored in, the third and

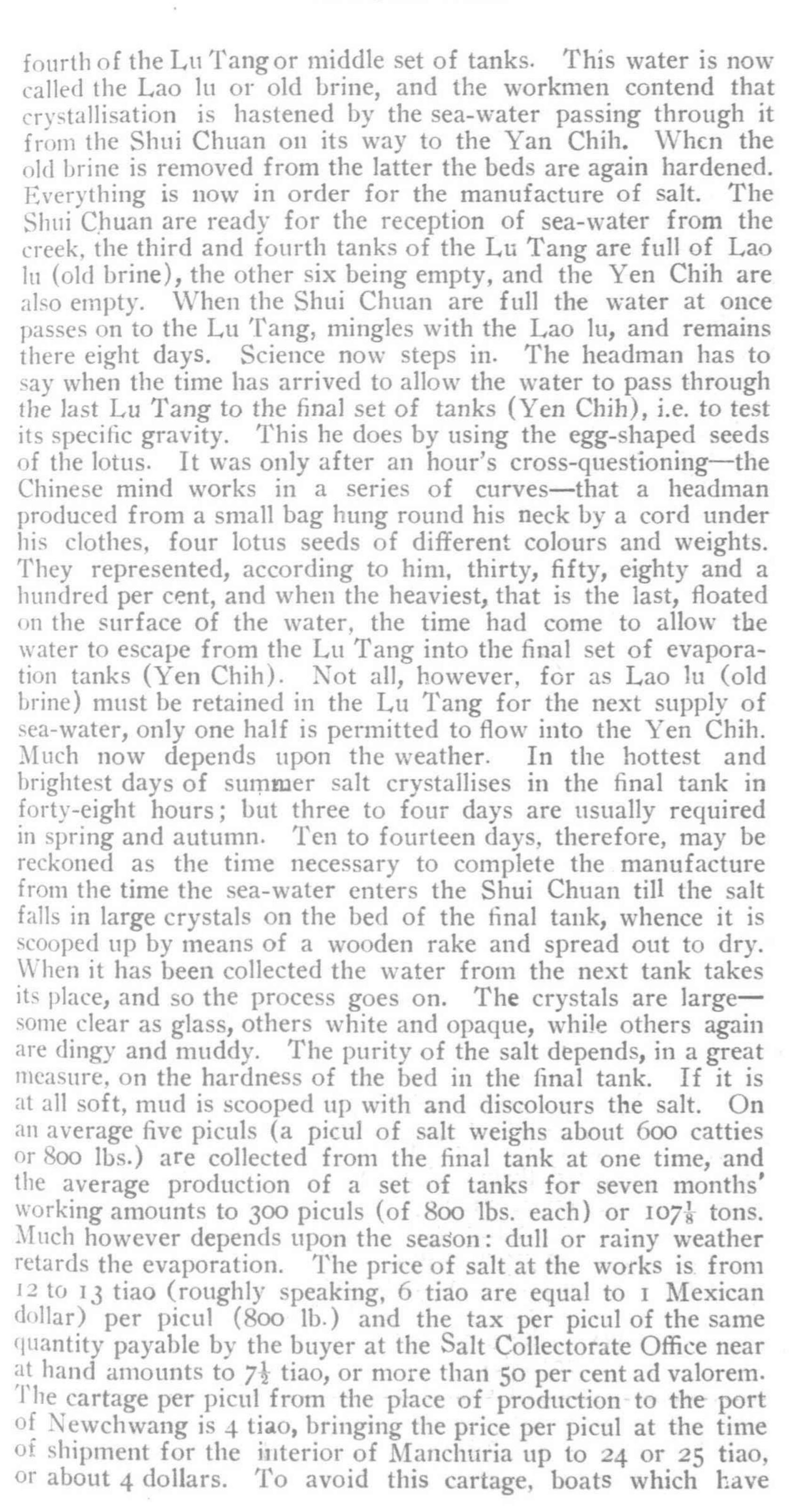
*Sir Alexander Hosie:, 'Manchuria." 1901. Methuen.



Sewing up the Bags



Loading into Trucks





Trainload of Salt

come down from the interior with beans frequently ascend the creeks, load a little salt and return to the port to fill up with return cargo. The shallowness of the creeks prevents their taking full cargoes at the works.

Appendix 1.

Localities of Salt-Production in China.

I. Sun-dried Salt:-

A. From sea-brine (coastal)

Sheng-ching, or Newchwang, district of Manchuria.
 Chang-lu district (Chihli province), as in this report.

3. Shantung.

4. Huai-pei (Northern Huai, in Kiangsu).

5. Fukien and Kuangtung.

B. From well or lake salt (inland)6. ShansiShensi

Mongolia Sinkiang

2. "Boiled" salt (inland)

I. Szechuen

3. "Board evaporated" or "boiled" (coastal)

1. Huai-nan (South Huai in Kiangsu)

2. Chekiang

Appendix 2.

Atmospheric Conditions at Tientsin.

Total Rain and Snow Fall from the year 1908 to 1912. 1909 1910 1911 1912 Inches Inches Inches Inches anuary February .04 March April May 4.73 1.83 lune 1.57 uly 11.40 August 12.72 4.02 8.05 September 1.08 October November December Total 26,30 17.81 14.05

1	909 De	The second secon	1910 De	grees	1911 De	egrees		The second secon
	Max	Min	Max	Min	Max	Min	Max	Min
anuary	45.0	2.0	29.0	3.0	41.0	-2,0	46.0	8.0
February	51.0	12,0	52,0	2.0	47.0	-4.0	54.0	10,0
March	69.0	15.0	69.0	17.0	64.0	25.0	67.0	20,0
April	87.0	28.0	87.0	28.0	86.0	33.0	85.0	9.0
May	107.0	41.0	87.0	40.0	92.0	44.0	94.0	46.0
une	96.0	55.0	101.0	53.0	94.0	55.0	100.0	60.0
luly	105.0	64.0	103.0	64.0	92.0	64.0	100,0	61.0
August		65.0	93.0	66,0	96.0	66,0	98.0	65.0
September	89.0	50.0	88.0	48.0	90.0	57.0	85.0	52.0
October	84.0	32.0	80.0	40.0	73.0	36.0	80.0	35.0
November	69.0	17.0	69.0	14.0	64.0	8,0	60,0	18.0
December	49.0	7.0	43.0	6.0	43.0	9.0	42,0	4.0
For Year	107.0	2,0	103.0	2,0	96,0	-4.0	100,0	4.0

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CONTENTS

PAGE

The Question of Outer Mongolia	I
China, Russia and Mongolia	12
Sea Salt Industry in North China	15
Unmasked Japan Unmasked Japan	20
The Fisheries of China	23
Industrial Commission for China	23
Alterations in Peking	24
Uniform Accounts for China's Railways	25
Official Changes in Peking	
River Conservancy In Kwangtung	25
Peking Kalgan Railway	27
Foreign Trade of China for 1914	29
New Mechanical Filter	33
Village Industries	34
Purity and Its Relation to Permanence in Metals	34
Asiatic Institute First Pacific Conference	35
Industrial and Commercial Notes	
Classified Index to Advertisements	39

UNMASKED JAPAN

By the ratification on June 8 of the new Sino-Japanese Treaties, which were signed at Peking on May 25, Japan has set her seal upon documents which brand her as a nation which has deliberately subscribed to the belief that Right is Might. As a consequence of the thinly disguised disgust and resentment with which her original demands upon China were greeted by the civilized world she was compelled to withdraw some of the more outrageous, but she has succeeded in compelling China to concede much to which Japan had no right other than that of the power to take by force what could not be gained by favour. While in alliance with nations that were expending countless lives and treasure to preserve the sanctity of Treaties, Japan openly proclaimed that she believed that Treaties could and should be violated unless the violation could be prevented by force. That Japan's adoption of high ideals in regard to international relationships was genuine was never believed by those who had studied the Japanese closely, but the world generally has hitherto received its impressions from publicists who were well paid to present Japan in the most attractive light, and from superficial observers who could not see beneath the mask that was hastily donned when visitors were to be impressed. The policy of misleading the world by generating a belief that Japan was a pacifically disposed country that could only be induced reluctantly to resort to war when there was no honourable alternative, and that the Japanese were animated by a sincere desire to embody in their spiritual life the best of the teaching of the West, was maintained as long as the deceit seemed to serve a useful purpose. The pretence was dropped when Japan, forgetting that the European War was a transient though terrible incident, decided that the esteem and good-will of the world, if they were forfeited, were of less value than material advantages which could be secured merely by breaking solemn promises and discarding an irksome disguise which concealed the weapons of the freebooter beneath the cloak of an Apostle of Peace. With a supreme contempt for the intelligence of the world, inspired no doubt by the gullibility that it had hitherto exhibited, Japan invited it to disbelieve the evidence of its own eyes. The real object that was held in view when Count Okuma made statements which he knew, and his Government afterwards acknowledged, were directly contrary to fact, may never be known, but it seems probable that the Japanese thought that there was a chance that the good opinion of the world might be retained—and some of the Japanese recognised its value—by an application on a national scale of the Christian Science principle of suggestion. Those things that pained China and the Treaty Powers were there, but if Japan asserted that they were not there the pain would disappear. "You must transfer to us the rights you have given to Great Britain to build certain railways," said Japan to China, and in the next breath she said to Great Britain," We are not taking any action that would jeopardise the rights of any country in China." Similarly with the demands that China should place Japan in the position of sole protector of her territorial integrity, and should appoint Japanese military, financial, and political advisers, and give Japan a voice in China's police administration. By denying the obvious effect that would follow the granting of these demands Japan apparently believed that the world would reject the evidence of its own judgment. The explanation of the inconsistency of Japan in at first being prepared to flout the opinion of the world, and then of endeavouring to conciliate it, is probably to be found in the fact that when Japan presented her demands to China she had not recovered from the fever of self-glorification that followed the surrender of Kiaochou. The Japanese really believed that this was a most brilliant feat of arms, and their success intoxicated them. For the moment the whole country allowed itself to express the opinion that had hitherto only been voiced by the extreme Jingoes, though believed by all, that Japan was far superior in prowess to the rest of the world and that she could do what she liked without fear of reproof or restraint. When the fever of self-glorification had abated somewhat, the clearer-headed of the Japanese authorities saw that they had betrayed themselves. Their endeavors to dispel the bad opinion that had been created could not possibly succeed, as denying a fact does not alter it—an elementary truism that the Japanese are apparently unable to grasp.

When the Chinese Government accepted the Ultimatum and later signed the Treaties under duress, they performed an act of singular heroism. The Government was a thing of yesterday. The loyalty to a long established Government that has grown and strengthened with the years, sometimes is unable to bear the strain if the Government has apparently been guilty of surrender of national rights. Nations have before this day been forced into war because the chauvinistic elements of the people overruled their rulers. The Government of the Republic of China had scarcely been established, and had certainly not had time to consolidate its position when Japan forced upon it the alternative of war or surrender of rights. To have plunged the country into war would have been the line of least resistance. The enemies of the Chinese Government who had been plotting rebellion under the benign protection of Japan, would be sure to represent any surrender of rights as a betrayal of the country. Yet, in spite of this the Government had the courage to risk their prestige and. reputation and take the course that saved China from the horrors of war. Japan, her desire for cheap military laurels whetted by the tawdry triumph at Kiaochou, no doubt hoped that she would be given an opportunity to match her well armed and organized forces against those of China. The patriotism of the Government has baffled Japan's designs. Concessions have been made, but a more than sufficient recompense has been forthcoming in the fervid national spirit that has been aroused among the Chinese people. Instead of diverting their resentment from its legitimate object to the Government, the people have shown a remarkable desire to assist the Government to strengthen the country and so render impossible in the future predatory demands by unprincipled nations. Another recompense has been the transference to China of the esteem and good-will that had been previously felt for Japan by the Western nations. In the face of the menace of war China resolutely refused to be a party to the impairment of the treaty rights of other countries. Japan, conscious that the Treaty Powers were not in a position to protect their rights; sought to damage them; China, conscious that she could receive no aid from the Treaty Powers, sought to preserve their rights. It may not be to-day or to-morrow that the full recompense will be paid, but China will assuredly receive it—and so will Japan.

Even the national self-sufficiency of Japan has not been entirely proof against the storm of disapproval that her domineering diplomacy aroused in Europe and America. The consciousness is beginning to dawn upon some of her publicists that her violation of treaty pledges has gained for her nothing commensurate with her loss of reputation and the engenderment in the Chinese nation of the belief that Japan is her deadliest and most dangerous enemy. Though there is no organized boycott of Japanese goods the Chinese are not buying Japanese manufactures. Despatch of goods by Japanese steamers is avoided whenever possible, and passenger traffic on vessels flying the Japanese flag has practically ceased. The shipping and commercial community in Japan has awakened to the fact that the cost of the recent chauvinistic demonstration is falling upon them and they are beginning to grow restive. This was reflected in the Japanese Press as soon as the Ultimatum was accepted by China. The diplomacy of the Japanese Government was severely criticised. The Jiji expressed the opinion that the retrocession of Kiaochou was a foregone conclusion, and thought it strange that it was only in the last stage of the negotiations that the Japanese Government notified its intention of returning the territory to China. This important paper also regretted that the Government had not taken proper precautions before asking China for railway rights that had already been given to Great Britain—though it is significant that the bad faith and immorality of presenting such a demand at all receives no denunciation. Publicists quoted by the Japan Times, a Japanese controlled paper, declared that the Government by opening the negotiations "have exposed this country to the suspicion on the part of occidental Powers, that it was taking an unfair advantage of China's weakness when other nations had their attention concentrated on the European War." Others denounced the Government for failing to communicate the exact form of the demands even to the allied Government of Great Britain. Moreover public meetings were held in Tokyo and elsewhere to denounce the Government At one mass meeting of the Taishi Rengo Taikwai, an association interested in Chinese affairs, held

in Tokyo on May 18, the following resolution was unanimously adopted:—

"The diplomacy of the present Ministry has done harm to the friendly Sino-Japanese relationship, has invited the suspicion of the Powers, and has injured the prestige of the Empire. The members of Ministry should take the responsibility and resign their positions."

As far back as November, 1914, we warned the Japanese Government that the application of the policy that Might is Right to China would jeopardise Japan's good name, though we refused to believe at that time that Japan proposed deliberately to break her pledged word. The Japanese populace has become wise after the event.

There was, apparently, a realization on the part of the Japanese Government that the despatch of an Ultimatum to China in the circumstances that existed was such an outrageous and uncalled for proceeding that it was necessary to manufacture some sort of defence. Following the usual procedure, Count Okuma issued one of his stereotyped statements.

On May 8 he sent to an American paper the following:-

"The motives and subjects of our negotiations with China are to meet the requirements of the altered conditions caused by the war with Germany and to bring closer relations with China by removing all causes of misunderstanding and thus to insure a permanent Oriental peace.

argument. Despite Japan's peaceful persuasion for over three months and our explanations that Japan is actuated only by an earnest desire to secure a peaceful settlement and that we desired to restore Kiaochou to China subject to certain fair conditions, not only has she failed to reciprocate our sentiment of accommodation and conciliation, but she gave it no favourable consideration and she has demanded the unconditional restoration of Kiaochou and also compensation by Japan for the unavoidable damages consequent on the battles in Shantung.

"China clearly declared that her demands were final. The Japanese Government, seeing the object of the negotiations thus ignored and the dignity and prestige of Japan greatly impaired, but still hoping that a peaceful conclusion can be reached, has after most careful deliberation decided to make some further concessions and to request China's reconsideration and acceptance before May 8. Our Minister at Peking has been instructed accordingly."

It will be seen that Count Okuma has followed the established Japanese practice of misrepresenting facts when they are not altogether suppressed. The despatch of Japanese troops to strategic points in China and the announcement that they would not be withdrawn until the negotiations were concluded are described as "peaceful persuasion," and as evidence that Japan was "actuated only by an earnest desire to secure a peaceful settlement." But there is no need to analyse Count Okuma's latest appearance as the President of the Japan Peace Society in the role of a fervent supporter of aggressive militarism directed against a weak and unoffending neighbour.

When the Diet reassembled in Tokyo it was inevitable that the Minister for Foreign Affairs, Baron Kato, should make a statement in regard to the Sino-Japanese negotiations. This statement was made on May 22. Baron Kato recapitulated the twenty-one demands and gave a short history of the negotiations which followed closely on the lines of the Japanese official communique issued on May 6. One sentence from his speech deserves reproduction. He said:—

"They (the demands) include no item which is incompatible with the principle of territorial integrity, equal opportunities and open door, which the Imperial Government have in the interest of China declared to the Powers from time to time."

This grotesquely false statement also appeared in the Japanese official communique, and its reaffirmation by the Minister for Foreign Affairs after just citing demands that the meanest intelligence could see were utterly incompatible with the principles of equal opportunity and the open door, appears to be a proof of the theory we advanced in May that the Japanese suffer from what might be termed mental myopia. In answer to an interpellation Baron Kato said that an outline of the demands was given to Great Britain, Russia, France and the United States, but as the fifth group were "desires" they were not announced to the Powers at first. Subsequently they were communicated to these Governments. This sitting of the Diet closed after an ultra

patriotic member had called Baron Kato a traitor, presumably because the Government had given a qualified promise to return Kiaochou to China some time in the future. On June 3 a vote of censure on the Government was moved in the Diet. The increase of Japanese troops in China during the negotiations was declared to have been a bad blunder and to have aroused the suspicions of the Powers. The withdrawal of the demands in Group V owing to pressure from without was a grave mistake and had impaired the prestige of the Empire. In notifying the demands upon China to the Powers the Government omitted some of them. The net result was the destruction of the friendly relationship between China and Japan; the creation of an anti-Japanese sentiment throughout China, and the generation of suspicion on the part of the Powers. The motion was rejected by 232 votes to 133.

That the Japanese Parliament in which the Government possessed a large majority, should endorse the vote of censure was not to be expected, but the fact that it was moved is full of significance. It will be remarked that the very points raised by the foreign critics of Japan's recent policy were deemed to justify censure. Of course it would be extremely unwise to assume that the indignation with the Government is due to an appreciation that Japan's actions in regard to China have been morally indefensible. The failure to prevent the world from realizing that Japan was breaking her pledges and violating the engagements entered into when she subscribed to the Anglo-Japanese Alliance, was the real ground of complaint. The Japanese Government could break all the political commandments without fear of domestic criticism—if they were not found out. Speaking generally, the action of Japan in annexing Korea after definitely guaranteeing that country's independence and territorial integrity passed without censure from the outside world, and in consequence there was no criticism in Japan. The resentment of the Korean people was of little consequence as Japan was in military occupation of the country. In the case of China the circumstances were quite different. A series of punitive demands were presented at a time when the friendliest relations were supposed to prevail between China and Japan; the Japanese Government deliberately issued false statements in regard to the incidence of these demands; and finally the acceptance of many of them which were repugnant to the Chinese was forced upon them by the menace of war. As a result the Powers have realized that no assurance from Japan can be trusted, and the Chinese people have been convinced that the greatest peril that confronts the Republic is the "friendship" of Japan. The Japanese people, having recovered to some extent from the delusion that the reduction of Kiaochou was a military feat that demonstrated the irresistibility of Japanese arms, have for their part begun to realize that defiance of the civilized world is an expensive luxury. They have therefore turned their resentment upon the Government.

Baron Kato, the Japanese Minister for Foreign Affairs, has had the formidable task of meeting attacks from two entirely different quarters. Some of his critics upbraided him for concealing from the Powers the fact that the demands in Group V had been presented to China. He replied that these were not "demands" but "desires," and declared that Japan had not brought great pressure to bear to secure their acceptance. This, of course, is an absolute misstatement of fact, as Japan showed as great, if not greater, anxiety to secure China's acceptance of the demands in Group V as any of the others. However, Baron Kato had to give some explanation of the careful attempt to mislead the Powers and it was probably thought that one more misrepresentation could not matter much. But Baron Kato was also criticized by those who cared nothing about the Powers being misled, but who were incensed that the demands in Group V were not insisted upon. Again Baron Kato was equal to the occasion, and explained that they were only dropped because China had promised to negotiate upon them separately. Thus Baron Kato is responsible for the statement that the demands in Group V were merely "desires" and of such little consequence that they were not insisted upon, and further that they were of such great consequence that it was only because China agreed to negotiate about them separately that they were not insisted upon! The endeavour to explain the immoral and tortuous policy that the Japanese

Government has pursued has landed their apologists in such a maze that they affirm and deny in the same breath.

The exposure of the want of frankness and exactitude shown throughout by the Japanese Government has led to a belated attempt to show that the demands in Group V were specifically separated from the others in the original instructions sent to will. Hioki, the Japanese Minister in Peking, on December 3, 1914. It is, of course, possible that such instructions were sent. If they were the fact remains that when the demands were presented to President Yuan Shih-kai no intimation was made that Group V stood on a different footing from the other Groups, and on several occasions, before the other Groups had been disposed of, Mr. Hioki sought to compel the Chinese delegates to agree to demands in Group V, notably that for the transference to Japan of rights already granted to Japan's ally, Great Britain. It will take much more than the singularly fortunate discovery at the eleventh hour of instructions about which not a word had previously been breathed, to acquit Japan of wanton bad faith towards all the Powers, and particularly to the one to whom she was bound by the close tie of alliance. However much Japan may dissimulate and equivocate she will not be able to clear herself of the charge that she took advantage of China's weakness and the preoccupation of the Powers in the European War to press for the acceptance of demands that would alter the status quo in the Far East, impair China's independence, and render nugatory the principle of equal opportunity, all of which Japan had solemnly bound herself to maintain. Neither will dissimulation and equivocation secure her acquittal of the charge that she deliberately misrepresented facts, and endeavoured to secure for herself rights belonging to her own ally because she believed Great Britain was too preoccupied to protest. This demonstration of the fundamental insincerity of the political professions with which Japan has hitherto deluded the world must be an unpleasant shock to those who believed in the reality of her spiritual renaissance, but it is fortunate for the future peace of the Far East that Japan should have shown herself in her true colours before she could carry to success her policy of politically subjugating China.

In conclusion it may be as well, for the benefit of those who still think that anti-foreignism is unknown in Japan, to quote a portion of a leading article from the Osaka Mainichi, one of Japan's leading newspapers. The article is headed "International Hypocrisy," and reads in part as follows:—

"The German Chancellor denounced Italy in the bitteres terms in the Reichstag for her bad faith and disregard of treaty obligations. Some ten months ago, when Germany herself tore up the treaty of Belgium's neutrality, the same Chancellor in the same house proudly declared that 'necessity knows no law.' It is so with England. When she declared war on Germany, it was only in name of safeguarding 'sacred' international treaties. Now the same England praises Italy for her tearing up the treaty and throwing the sword against the throat of her former allies. This is not so only with Germany and England, but is the usual mood of the Western people. They are very clever to cover their selfish ambitions with so-called principles which are fitting and appealing. So they annex other men's territory in the principle of Imperialism. They kill coloured people in the principle of promoting civilisation. They steal in commercial principle. They close the door in the principle of the Monroe doctrine. They ask to open other men's countries in the principle of Open-door. And they claim themselves to be honest and sincere. This hypocrisy at last brought this great conflagration in Europe, and they are now receiving the punishment they deserve."

Criticism of this kind from a subject of the country that annexed Korea and has just been prevented from closing the door in China argues lamentable lack of sense of humour. There is no necessity to expose the false assumptions and erroneous reasoning of this article; we reproduce it merely for the benefit of those who harbour misconceptions in regard to Japan's opinions of the world. If it be realized that the Japanese really do believe themselves to be the chosen people who may make, and need not follow, precedents, it will become easier for the other Powers to understand Japan's international policy and to take the precautionary measures that are necessary. That they do so regard themselves may be seen from the following extract from a column, "Voices from the Vernacular Press." which appeared in the Japan Times of May 25:—

"If it be permissible to admit of the existence of the Chosen People, and that they should occupy the highest position in the comity of nations, the larozu is confident that the Yamato race has every qualification and possibility to become one. Its history and freedom from mixture of blood as well as the power of expansion so clearly manifested so far, all go to make it possible for the people of Japan to come to hold the hegemony of the world. In the Far East, at least, Japan, according to the paper, is destined to hold the hegemony in its hand."

Not a little characteristic is an article in another portion of the same issue of the Japan Times, holding up to scorn an American writer because he had dared to suggest that Japan sought to secure the hegemony of the Far East!

Appended are the instructions alleged to have been given by

Baron Kato to Mr. Hioki on December 3, 1914:

"In order to provide for the readjustment of affairs consequent on the Japan-German war and for the purpose of ensuring a lasting peace in the Far East by strengthening the position of the Empire, the Imperial Government have resolved to approach the Chinese Government with a view to conclude treaties and agreements mainly along the lines laid down in the first four Groups of the appended proposals. Of these, the first Group relates to the settlement of the Shantung question, while the second Group has for its chief aim the defining of Japan's position in South Manchuria and Eastern Inner Mongolia, that is to say, securing at this time from the Chinese Government full recognition of Japan's natural position in these regions, absence of which has hitherto been the cause for various questions tending to estrange the feelings of the two peoples towards each other. The object of the third Group is to safeguard the best interest of the Han-Yeh-Ping Company, with which Japanese capitalists are closely identified. It will thus be seen that there is nothing especially new in our proposals embodied in the foregoing three Groups, while as regards the fourth Group, it is only intended to emphasize the principle of China's territorial integrity, which has so often been declared by the Imperial Government.

"Believing it absolutely essential, for strengthening Japan's position in Eastern Asia as well as for preservation of the general interests of that region, to secure China's adherence to the foregoing proposals, the Imperial Government are determined to attain this end by all means within their power. You are, therefore, requested to use your best endeavour in the conduct of the negotiations, which are hereby placed in your hands.

"As regards the proposals contained in the fifth Group, they are presented as the wishes of the Imperial Government. The matters which are dealt with under this category are entirely different in character from those which are included in the first four Groups. An adjustment, at this time, of these matters, some of which have been pending between the two countries, being nevertheless highly desirable for the advancement of the friendly relations between Japan and China as well as for safeguarding their common interests, you are also requested to exercise your

best efforts to have our wishes carried out.

"It is very likely that in the course of these negotiations the Chinese Government will desire to find out the attitude of the Imperial Government on the question of the disposition of the leased territory of Kiaochow Bay. If the Chinese Government will accept our proposals as above stated, the Imperial Government may, with due regard to the principle of China's territorial integrity and in the interest of the friendship of the two countries, well consider the question with a view to restoring the said territory to China, in the event of Japan's being given free hand in the disposition thereof as the result of the coming peace conference between Japan and Germany. As, however, it will be necessary in restoring the said territory to China, to lay certain conditions such as the opening of the territory for foreign trade, establishment of a Japanese settlement, etc., you will ask for further instructions when you propose to declare to the Chinese Government the willingness of the Imperial Government to consider the question."

THE FISHERIES OF CHINA

Statistics are unfortunately not available to show the annual value of the fishery industry to China. That this value would

run into enormous figures will readily be believed when it is recalled that fish is one of the staples of diet, not only in the coastal regions, but also in the interior. The China Sea teems with edible varieties of fish and this is true of the rivers, streams and other inland waters. Many millions of the population are engaged in the industry. The methods employed have not varied for hundreds of years, and it is certain that much benefit would accrue if knowledge of European methods of catching, preserv-

ing and transporting fish were generally adopted.

With a little encouragement from the Government a considerable export trade could be built up. At present this trade is inconsiderable and is principally confined to the export of piscatorial delicacies to Chinese living in other countries. In view of the great advance that has been made in the preserving and canning of fish in other countries, and of the fact that for the greater part the catch in Chinese waters is suitable for foreign consumption there should be attractive openings in this direction for enterprising capitalists. The provision of swift parent vessels, steam-propelled, to supply the sea-going fishing fleets with necessaries and to collect the hauls for transport to central receiving depots would be one means of largely increas-

ing the returns from the industry.

Some steps have lately been taken by the Ministry of Agriculture and Commerce to place the industry upon a better basis. A small appropriation has been made to be expended in the encouragement of fisheries, and provision has been made for the periodical inspection and registration of vessels engaged in the industry. Commissioners have been collecting data in regard to the number of men and vessels employed; the nature of the chief fishery products, and the annual value of such products. Recommendations in regard to the best means of developing the industry have been made by these Commissioners and those that are approved are being acted upon as opportunity and finances permit. A useful beginning has been made by the establishment of fishery schools along the coast. Several of these have been started and they are being well attended.

Although at present the fishery industry of China makes but little direct or indirect contribution to the national revenue, there is reason to hope that the attention that is being devoted to it by the Government will be productive of good results and that before many years have passed fishery products will take a prominent place among China's exports. The balance of trade is necessarily much against China at the present time and the Government recognises that any addition to the list of staples

exported is heartily to be welcomed.

INDUSTRIAL COMMISSION FOR CHINA

The Government has for some time past realised the necessity of making an intelligent effort towards the encouragement of commerce and industry, and with this in view His Excellency Chou Tsz-chi, Minister of Agriculture, Commerce and Industry, petitioned the President in a lengthy memorial, embodying the whole scheme together with forty-eight articles for the governing of an Industrial Commission to be appointed upon the recommendation of the Ministry by the Chief Executive.

On June 9th the President replied to the memorial which he approved in detail. The following Commission

appointed:

Chairman, Yung Tao.

Vice-Chairmen, Mr. Roy S. Anderson, and Chang Sin Hu. Messrs. Yung Tao and Anderson at present are Advisers to the Ministry of Agriculture, Commerce and Industry, while Mr. Chang is a Councillor of the same Ministry. The names and offices of the other members of this Commission will be given in the next issue of this paper.

The Commission will be divided into three main departments,

as follow:

Department of Commercial and Industrial Experimentation. Department of Information.

Department of Exhibits.

Each department will have a chief to be known as a "departmental chief" and each sub-division, of which there will be eleven, will have a chief to be known as a "sectional chief." There will be a Secretary and a Treasurer, who will conjointly control

the general affairs of the Commission. The Chairman and Vice-Chairmen are appointed by the President upon the recommendation of the Ministry, while the remaining officers of the

organisation are appointed by the Ministry.

For the present the Commission will be housed in the buildings heretofore used exclusively for the National Commercial and Industrial Museum. The Commission could not have found more suitable quarters, and by order of the Ministry the buildings have been repaired and furnished to accommodate the work to be carried on by this new organisation.

The main objects of the Commission are systematically to assemble all useful data on the various lines of commerce and industry, and to make scientific research and experiments where needed. All information will be disseminated that is calculated to stimulate and assist in the building up of Chinese commercial and industrial enterprises as well as to encourage the investment of foreign capital. It has been extremely difficult in the past for the foreign business man to secure the needed information for the establishment of any enterprise in China, and it has been equally difficult for the Chinese themselves.

The Commission intends to establish branches throughout China, and desires to sustain the most cordial relations with the official and private commercial and industrial organisations in each foreign country. The Chinese Government fully realises that foreign co-operation is of vital importance, and it is the sincere desire of the Government to invite this active assistance

from abroad.

ALTERATIONS IN PEKING.

The construction of a railway round the city of Peking to connect the Peking-Kalgan and the Peking-Mukden railways, and the alteration of the famous Chienmen, or central southern gate of the Tartar City, were begun on the morning of June 16. This work was referred to in the FAR EASTERN REVIEW of June, 1914, and will constitute a marked improvement in the handling of both rail and ordinary traffic at the capital. Four openings are to be made in the city wall in immediate proximity to the Chienmen to facilitate the great vehicular and pedestrian traffic always pouring in and out of the city, and the massive demilune of the gate is to be removed to be replaced by a well arranged esplanade and roads giving freer access to both the Peking-Hankow and Peking-Mukden stations.

The Minister of the Interior, Mr. Chu Chih-chen, inaugurated the work with some ceremony on the morning of June 16, a special silver pick having been provided for the purpose. He also made a speech outlining the importance of bettering the city and making adequate thoroughfares. In this respect the Minister has done a great deal for Peking. There now exist splendid macadamised roads, where once there were quagmires, and other new roads are being built. In a future issue we will deal further with this phase of development in this ancient capital.



DELEGATES REPRESENTING CHINA AND JAPAN IN THE RECENT NEGOTIATIONS

LEFT HAND SIDE OF TABLE, (reading upwards): Chinese Vice-Minister of Foreign Affairs, MR. TSAO JU-LIN; Chinese Minister of Foreign Affairs, MR. Lou Tseng-Tsiang; A Secretary of the Chinese Ministry of Foreign Affairs, MR. Sze Lu-peng.

RIGHT HAND SIDE OF TABLE, (reading upwards) Third Secretary, Japanese Legation, Mr. T. Takao; His Excellency the Japanese Minister, Mr. Eki Hioki; First Secretary, Japanese Legation, Mr. Yukichi Obata.

UNIFORM ACCOUNTS FOR CHINA'S RAILWAYS

Steps have been taken by the Minister of Communications at Peking, Mr. Liang Tun-yen, to have the accounting systems devised by the Unification of Accounts Commission introduced on the various Chinese railways. In accordance with this decision the Minister of Communications has issued instructions to the various railways as follow:—

It is hereby notified that hereafter Inspectors of Accounts will be sent by this Ministry to the different railways from time to time to examine the accounts and to keep in close touch with the accounting work of the different railways. On the arrival of such Inspectors the Railway officials are hereby ordered to furnish them with all necessary information and to assist them in making their examinations.

Although monthly statements and annual reports are now sent by the different railways to this Ministry for audit and approval, such statements and reports only represent the summarized results of the transactions taking place during the periods concerned. It is impossible for such statements and reports to contain the detailed items and to show definitely the circumstances under which the transactions were made. This Ministry, therefore, deems it necessary to appoint and despatch inspectors of accounts from time to time in order to ascertain whether the accounts check with the vouchers, whether the funds are properly expended and whether the methods of entry are adequate and satisfactory. With regard to other problems in relation to accounting it is also deemed necessary that such inspectors be despatched to make proper inquiries so that misunderstandings may be avoided and progress made. As the mileage of railways will increase and railway problems tend to become more complicated from year to year, and as many of the lines will be far away from Peking, such inspection will be more indispensable as time goes on.

According to former practices, antiquated reports were translated and rendered, these being considered adequate to represent the original accounts; and unless protests were made or special inquiries held where fraud was suspected, actual investigation was scarcely resorted to. Therefore the appointment of inspectors often aroused suspicion and antagonism and created unfavourable comment and uneasiness.

But it should be understood hereafter that the inspection of the accounts of your railways is not inspired by any suspicion of irregularities but is undertaken purely as a part of the regular routine of railway administration. In ordinary business administration, the shareholders of a company or corporation elect or appoint certified public accountants as a matter of course to inspect and audit the books of the company. In foreign countries the accounts even of private railways are subject to inspection by Government inspectors as well as by those appointed by shareholders. Moreover, if the accounting system of a railway is adequate and operating satisfactorily, or if the traffic service of a railway is making progress, its merits will be disclosed and made known better through the testimony of the inspectors.

It is therefore ordered that the different railway administrations should furnish the inspectors of accounts with all necessary information and give due assistance.

OFFICIAL CHANGES IN PEKING.

Several official changes have taken place in Peking during the month. Mr. Chang-hu, co-Director of the Central Salt Administration, has been removed from office and has been replaced by Mr. Kung Hsin-chan, a native of Anhui Province. Mr. Yih Kung-cho, Vice-Minister of Communications, has been removed and his work is being taken over by Dr. George Mark, co-Vice-Minister of Communications. Mr. Chao Ching-hua, Managing Director of the Tientsin-Pukow Railway, has also been removed. All of these officials are to be tried on charges of corruption.

RIVER CONSERVANCY IN KWANGTUNG PROVINCE

Translation of the Report of the Director-General of the Bureau of River Conservancy in Kwangtung.

The Bureau of River Conservancy of Kwangtung Province has been organized by a Presidential Mandate, and Mr. Tan Hseh-hung has been appointed Director-General to take charge of the conservancy work. For a preliminary inspection of the water courses, the temporary service of Mr. Hugo von Heidenstam, Chief Engineer of the Huangpu Conservancy Works, has been secured, as was publicly announced on January 1. Mr. Heidenstam arrived in Canton on January 30, and started on February 2nd with Director-General Tan for a reconnaissance of the rivers as far as Yow Tsa Tan, above Wuchow, on the Si Kiang; Lan Kang Wei, on the Pei Kiang; and Ta Tun on the Tung Kiang. Careful examinations have also been made of the important tributaries of the above named rivers, which included the trip to examine the elevation of the land between Hsin Hsing and Kai Ping with a view to ascertaining the possibility of excavating a new outlet to the sea. Extensive investigation has been made throughout the trip concerning the causes of floods, by gathering information from the Maritime Customs authorities and by taking instrumental records with regard to the rainfall, discharge of water, velocity of current, and the width and depth of the rivers.

Director-General Tan and Mr. Heidenstam returned to Canton on Feb. 11, when Mr Heidenstam had to return to Shanghai owing to the urgent engineering works of the Huangpu Conservancy. He left for Shanghai on Feb. 19. As a result of the reconnaissance trip, Mr. Heidenstam has expressed the opinion that a year's time will be required to make a careful survey examination of the important rivers and determine the

methods of building the dikes, from which complete detailed maps have to be prepared. Then, with the data thus obtained, proper construction plans can be determined. The survey work must precede the actual construction work, without which it is impossible to determine the construction plans and to estimate the construction expenditures. Mr. Heidenstam has therefore drafted a general plan for the survey work and has recommended a Swedish engineer to be the engineer and surveyor of the Kwangtung River Conservancy Bureau, which has been approved by Director-General Tan. Mr. Heidenstam advised that the engineer should proceed to make an examination of the rivers, and, when that is completed, go to Shanghai to study the Huangpu Conservancy Works and have a personal discussion with Mr. Heidenstam. The engineer assumed his duty on March 1, and on March 3, he started with Director-General Tan for another reconnaissance trip of the rivers, following the same routes as were taken on the first trip. It happened then that the water along the routes was at its lowest level, for which many water marks have been established on the rivers as a basis of comparison with the survey records. The Engineer and Director-General Tan returned on March 11, and the Engineer left for Shanghai on the same day.

The general plan of survey drawn up by Mr. Heidenstam, agreed to by the Engineer, and approved by Director-General Tan, comprises seven parts, which will be carried out with organized survey parties as soon as the Engineer returns from Shanghai. The survey work on the Si Kiang from Mo Tao Men to Wuchow,

is divided as follows:

I. Levelling survey of the water courses.

2. Survey of important tributaries and other important points such as river junctions, shallow waters, and gorges.

- 3. Observation stations should be established at selected points for measuring and recording the velocity of current and discharge of water. The data thus obtained shall be used for plotting the velocity and discharge curve in order to determine the relation between water level and the discharge of water.
- 4. Inspection and boring, if necessary, of the river banks and river beds.
- 5. To ascertain the amount of mud carried by the river and its tributaries in summer and winter.
- 6. Observation of rainfall should be taken at various observation stations, where water gauges and tide gauges, if necessary, should also be established.
- 7. Survey of the large dikes, from which plane and side view maps are to be prepared.

To complete within a year the survey of numerous dikes and water courses covering such a wide area requires division of work; it is proposed to organize six survey parties each taking up a division and all working at the same time. The estimate for the year made by Mr. Heidenstam for survey expenses, purchase of survey instruments and steam launches, stationery and sundry expenses and so on, will be about \$160,000 Hongkong currency. Since the commencement of the Bureau, \$20,000 has been received, being the remittance from the Kwangtung Guild of Peking; \$100,000 in subsidiary coins has been transferred from the Famine Relief Office to this Bureau by order of Governor Li, and \$20,000 Canton Notes, equivalent to \$9,100, has been transferred to this Bureau from the provincial funds through the request of the Eighth District Guild of Hongkong. The total amount of the above receipts is approximately over \$110,000, which falls far short of the expenditure estimated by Mr. Heidenstam. In view of the above circumstances, the Director-General desires to exercise strict economy in the administration of the affairs of the Bureau, and to do his best in devising means to make good the deficiency.

The Si Kiang rises in the plateau of Yunnan and meets the Liu Kiang near Sunchow. Thirty miles above its confluence with the Liu Kiang the Si Kiang first joins the Hungshui Kiang, which also rises in Yunnan and has been regarded by some authorities as the parent stream of the Si Kiang. Running through a length of 1250 miles, it carries down in its course a large quantity of sand and mud which silt up at various points in the river, on account of the irregular shape of the field enclosures alongside the lower course. Such silting up inevitably raises the river bed, thus forming patches of shoal water here and there. In addition to such obstacles, the river unfortunately has no outlet from Wuchow to Samshui and the dikes have not been built systematically according to the principles of conservancy. As a result, the area around the lower course was always flooded whenever there was an overflow in the upper course. For the purpose of a proper conservancy, the following five plans have been suggested.

1. Prevention of Overflow.—There are two different ways for the prevention of overflow, the establishment of reservoirs in the upper course and extensive afforestation. As the upper course of the Si Kiang runs through many mountainous districts with rich valleys the cost of purchasing the fields together with that of building the reservoirs must be so great that it would be beyond the means of the Bureau to carry out. Moreover, there will be the maintenance cost of the reservoirs from which no profit can be derived. So the plan of building the reservoirs is out of the question. On the other hand, the plan of extensive afforestation is adaptable. The forests can absorb quantities of rain water like a sponge, and the roots can hold the soil firmly in place and help resist erosion, which furnishes the chief supply of silting in the river. Apart from this protective value, extensive afforestation has also its economic value in the production of wood. It is advantageous, therefore, that this plan should be adopted for the purpose of preventing overflow, although its effect could only be brought about in a slow manner. It is now under consideration with a view to securing the co-operation of

the administrative authorities of the Si Kiang valley in carrying

out the plan.

2. Dredging.—The formation of patches of shoal water is evidently due to silting caused by the irregular shape of the field enclosures in the lower course. It is also due to the fact that the unevenness in the width of the river has the effect of reducing the running force of water through wide sections so as to allow the silting of sand and mud which it carries. In occidental countries where conservancy work is efficiently carried out, it is quite common to have dikes built in wide sections of the river in order to keep at an even rate the discharge of water, thereby preventing silting in any form. This method can well be applied in this case together with extensive dredging of the river beds, and also for widening the narrow parts of the river. A definite plan will be decided upon after a careful survey.

3. Dividing the Water Force.—Had there been an outlet from Wuchow to Samshui, the force of the water could have been easily divided. The lack of it has led to the proposal of building one. Several surveys have already been made by the Government Army Survey Office in Canton. The Hsin Hsing Kiang and Yang Chun Kiang route, via Tien Tang Heu and Yang Chun Hsien, which has been formerly proposed, has been found impracticable for lack of adequate river grading. The Hsin Hsing Kiang and Kai Ping route, via Chin Chi Wa, possesses proper river grading, only the area around Chin Chi Wa is highly mountainous so as to render excavation work difficult. Fortunately for the latter route, there is another intermediate point where the desired work can be easily effected, and that is via Kao Ming Ho. When this route is open, it will be easy to lead the water from Kai Ping into the sea. The question now is to have a careful re-survey of the latter route and also a general survey of the surrounding districts with a view to

finding a still better route.

4. Repair of Dikes .- It has been a regrettable fact that the dikes built in the past have been done unsystematically and without co-operative work, and that the unscientific slopes and culverts have been the chief cause for the breaking of the dikes. The dike built in Sang Yuan Wei was well done with cement and sand, whereas those built in Chen Tang and Ta Wae were made of gravel and earth. The natural result was that the latter were weak, and broke before the violence of the current. Again, the dike built in Lan Kong Wei which has been considered one of the best, broke shortly before the inspection trips. Mr. Heidenstam, the engineer, had occasion to examine into the causes, and he was of the opinion that the breaking was due to lack of proper foundations. Had the foundation been scientifically laid down, such trouble and loss could have been easily avoided, and a large amount of expenses for its repair could have been saved. In view of these circumstances, it is highly important that this Bureau should establish a separate office, supervising, inspecting, and taking charge of all affairs relating to the construction, repairs, and improvement of dikes and culverts. While the work of financing, issuing tenders, granting contracts, and dividing the construction, could be left to the local managements the above office should be responsible for the uniform adoption by the local managements of the plans authorized by the engineers of this Bureau, the object being to effect a uniform system in the work.

5. Improvement of the Lower Course.—In addition to the field enclosures in the lower course, there are many improper dams which, like the field enclosures, are built by local people, and calculated to derive selfish local benefits with no regard for the general welfare. Such works, being sometimes the cause for the overflow of water, should be destroyed in the interest of the public, and any similar additions should be strictly prohibited. It is the intention of this Bureau to conduct a careful survey for

the purpose of carrying out these measures effectively.

It is sincerely hoped that these five proposed plans for conservancy of the Si Kiang River will meet with the general approval of the public, and will call forth its united support. The surveying work is expected to be completed a year from now, but the actual work will need much more time in its execution. While the work is just begun, the seasonal overflow is fast approaching. Preparations on the part of the public to meet such an emergency should be done right now, before it is too late.

THE PEKING-KALGAN-TATUNG RAILWAY

REPORT OF OFFICIAL INSPECTION TRIP

The following is a summary of the Report on the Inspection of the Kalgan-Tatung Railway, by Shen Chi, Director of the

Department of Railway Engineering in Peking:

In accordance with orders I set out for Kalgan on the 6th of February with Mr. Y. C. Whang, Chief of the Traffic Division, and Mr. Yang Sho, Junior Expert, conjointly with Mr. Kwang Sung-Mow, Chief Engineer of the line, and on the 8th we travelled from Kalgan towards Tatung by train. We stopped at every station and every important bridge for inspection. On the 9th we inspected all the buildings, shops and station premises at Tatung. On the 10th we reached the end of the track of the Tatung-Fengchen Section, which was about 20 li from Tatung. On the 11th we examined the place where the Tung-Cheng line will join; and also examined the Weiren branch line. The entire trip took us six days.

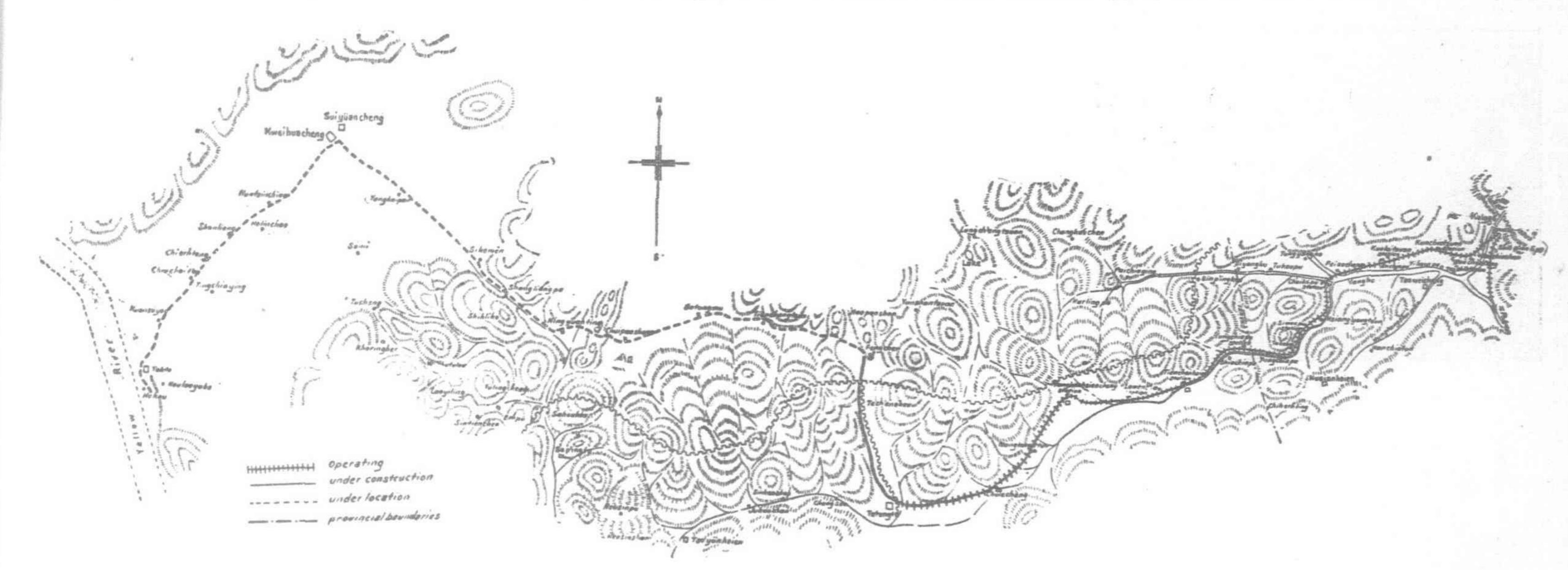
1. The construction work of the entire section: The construction work of the entire section between Kalgan and Tatung has been completed with the exception of the sidings at the Tatung Station. Half of the sidings originally planned have not been constructed on account of the traffic not being fully developed. The mileage of the main track and sidings, the

and minor bridges is 234 with 459 spans, and the total number of drains is 372 with 373 spans. The total length covered by bridges and drains is 14,360 feet. The expenditure for bridges amounts to \$2,089,500, the average expenditure per foot of bridge being \$145, which is less than half of the cost for bridge work on some of the lines newly constructed in our country. The construction is firm and the material used, strong. After careful examination they proved to be sufficiently strong for all purposes.

4. Stations and Buildings: All the stations and other buildings are constructed in simple style, all unnecessary embellishments being dispensed with. They are durable and fit for practical use. In order to encourage native products, foreign materials are avoided whenever suitable materials may

be obtained from home producers.

5. Rolling-stock: As to rolling-stock, the wagon bogies are ordered from abroad while the upper structures are of good material and durable construction; and they are of the kind that can be easily repaired in this country. Safety devices are of the latest pattern, both air brake and hand brake being used. The wheels are of the Barhom type, which stands well the wear and



Route of Extensions of the Peking-Kalgan-Tatung Railway

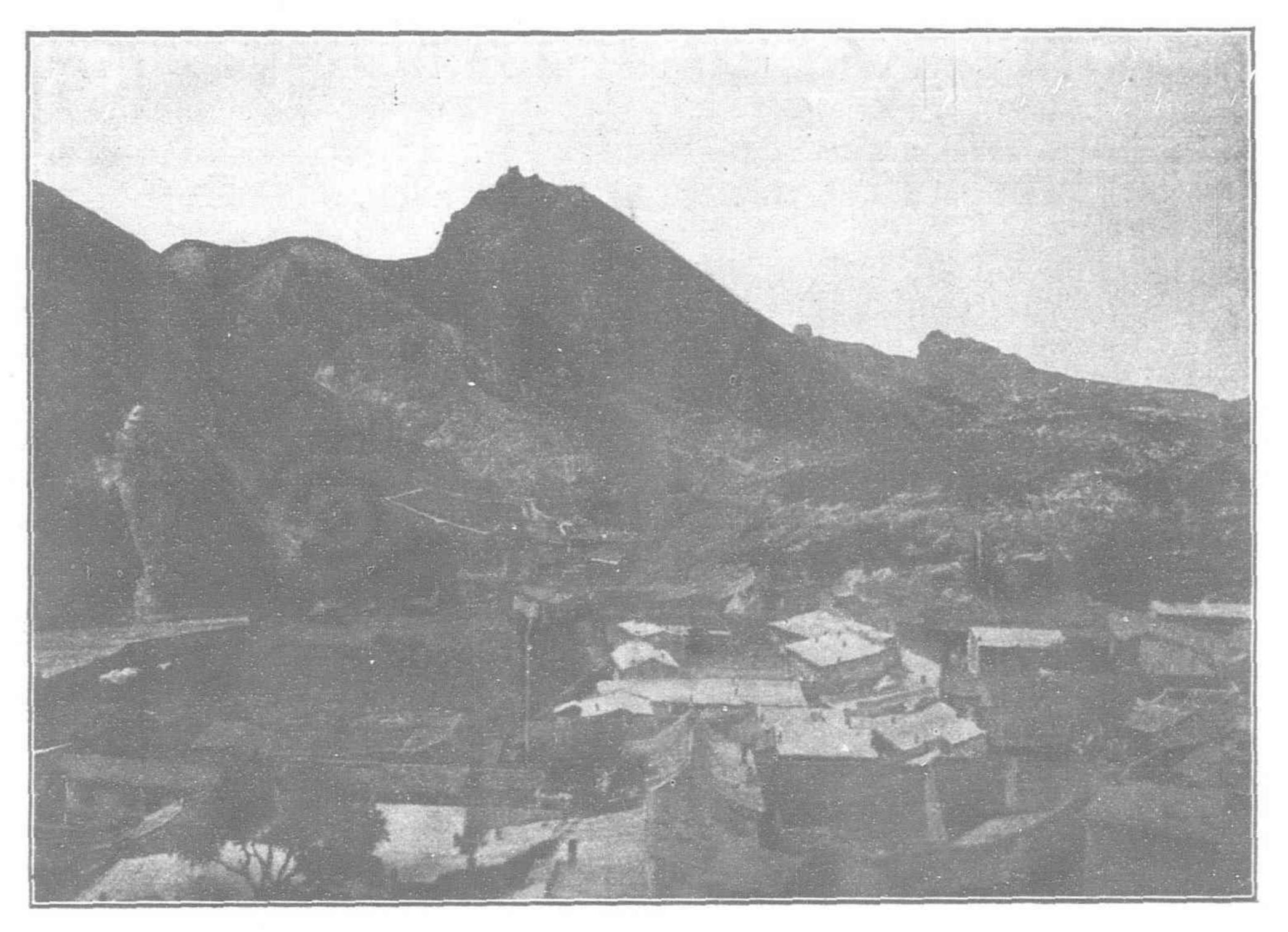
number of bridges and drains and their dimensions, the stations, mechanical works, material storehouse, staff quarters, water-towers, turn-tables, electric wires, etc., are found correct according to the list submitted by the Peking-Kalgan Railway.

2. The Track: As to the track, the minimum radius of the curves is 1,000 feet, and the steepest gradient is 1:115, which are suitable for all the purposes of a main line. The route as originally surveyed and determined upon seemed too steep. In view of the difficulties in running the trains on the Kwan-Kow Section the original plan was modified at several points and the degree of gradient was changed from 1:40 to 1:115. Although the line is lengthened by about 10 li on account of this modification, the construction is much facilitated by choosing this level route, and half of the expense as originally estimated has been saved. The change of the route not only saves the capital expenditure but also makes it suitable for all purposes of a main line, which will prove of considerable benefit when the line is extended to Sei-Yuan or joined with the Tung-Cheng line.

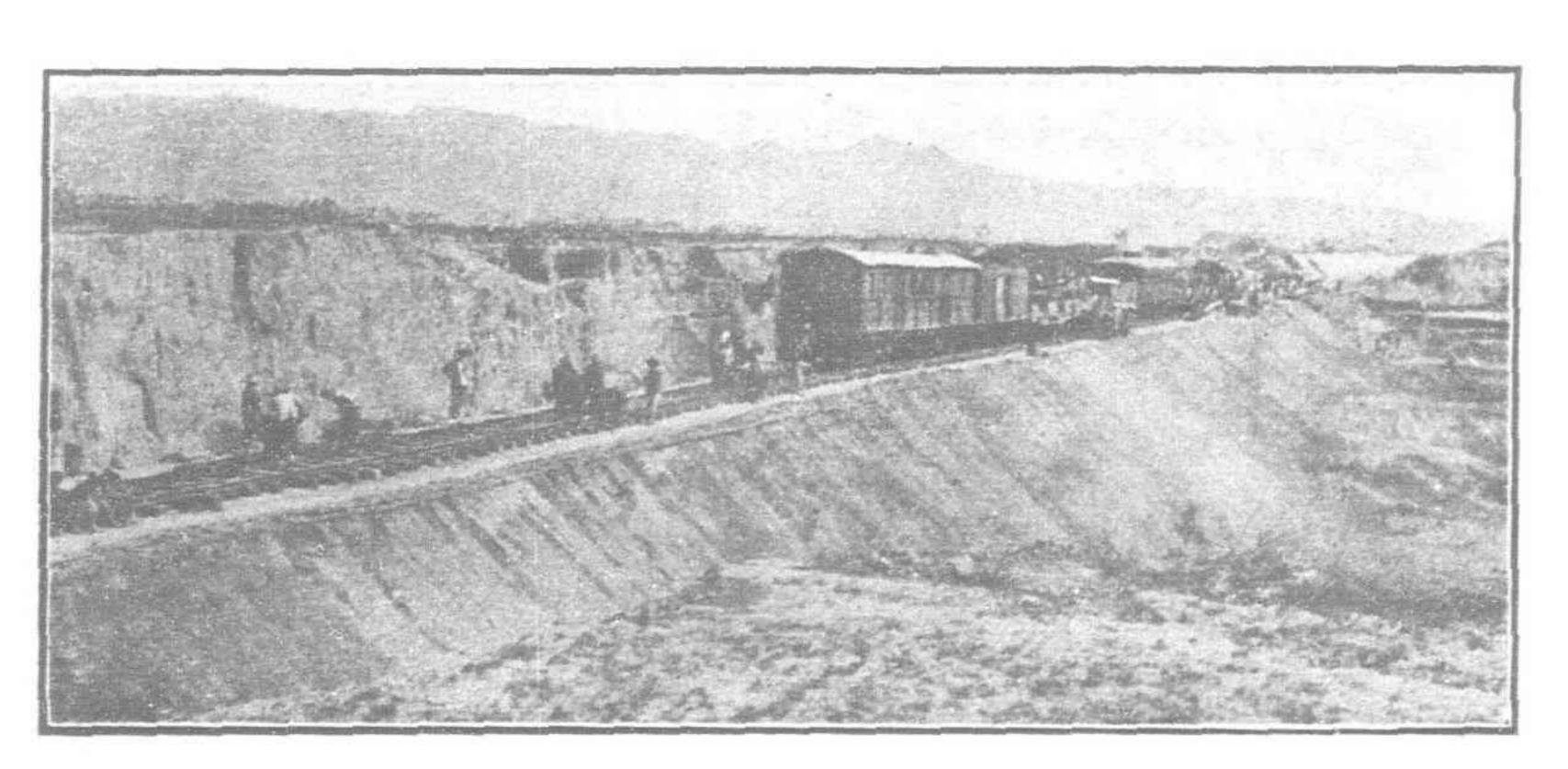
3. Bridges and Drains: The largest bridges are the Yuho Bridge (18 spans of 100 feet each; height, over seven chang) and the Ta-yang-ho Bridge (16 spans of 100 feet each; height, over six chang). Next in dimension is the Shiao-yang-ho Bridge (5 spans of 100 feet each). The total number of major

tear at places where curves are sharp and numerous.

Comparison of the actual and estimated items of expenditure: As originally estimated the length of the line was 321 li and the expenditure was a little over Tls. 7,016,000, which is about \$10,000,000. It was to be completed in three and a half years (the work began in July, 1909). The line as now completed embraces a length of 331 li at an expenditure of little over \$8,604,000. Reckoning from July, 1909, to the end of 1914, the work has taken about six and a half years. Although the period of construction is prolonged for three years the expenditure is about \$1,400,000 less than what was estimated. If we compare the items estimated with those actually expended, we shall find that the expenditure for road foundation is about \$1,380,000 less than the estimate. This is due to the adoption of the new route which is less hilly than the route first chosen. The actual expenditure for general direction is about \$280,000 more than what is allowed by the estimate, on account of the extension of the period of construction. As to rolling-stock, the estimate provided for 18 carriages for the second and third class passenger train. Although these have not been purchased, there is a fund of about \$70,000 set aside for the purpose. They have purchased one locomotive and 100 tons of wagon in excess of the estimate. However, taking the actual expenditure for



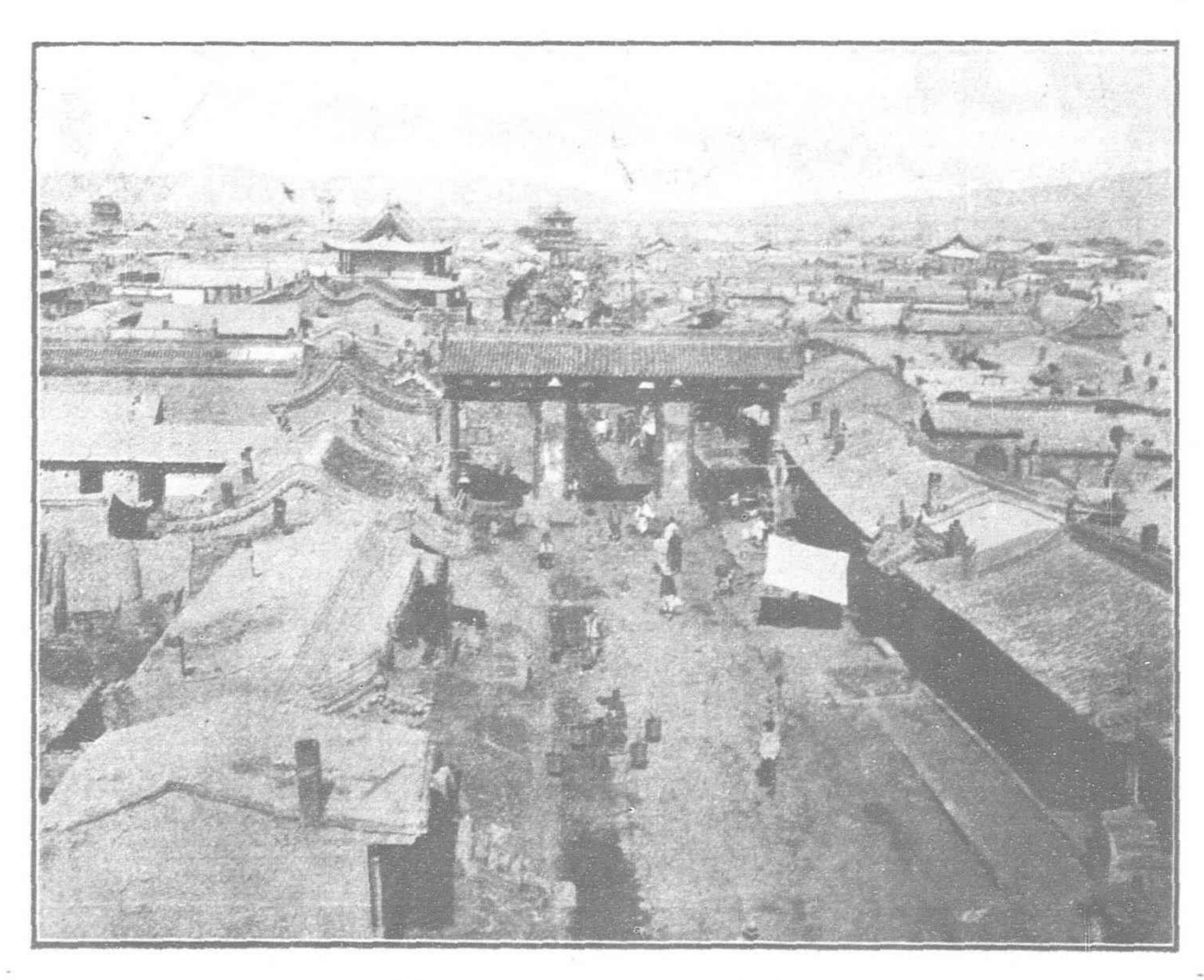
View of Kalgan, Former Terminus of Railway



Railway Crossing Chasm in the Loess



Concrete Culvert to Carry Embankment



View of Tatung-fu, Present Terminus of the Line

rolling-stock as a whole, it has not varied much from the estimated amount. The rest of the items of actual expenditure have not differed from the estimate to any appreciable extent. (A table showing the comparison of the different totals is herewith

appended.)

7. The Progress of Construction work on the Tatung-Seiyuan Section: Work has begun on the Section between Tatung and Fengcheng, a distance of over 70 li. The track has been laid as far as Yangtsung, a distance of about 20 li. As soon as the bridge at Yangtsung is completed the track will be further extended, and in the month of June or July this year train service will be opened as far as Fengcheng. As the latter place is a trade centre, the earnings of the Railway will be greatly increased as soon as the service is established. Traffic is rather scarce beyond Fengcheng, and no further increase in earnings can be expected until Seiyuan is reached. We found that bituminous coal (natives call it Ta-Tang) is produced at Weirenhsien, 70 li southwest of Tatung. On account of the lack of transportation means the coal is only mined in winter. The output is estimated at about 2,000 tons per day. If a sum of \$1,000,000 can be raised within a year or so for the construction of a branch line to Weiren-hsien, this branch line would be able to contribute to the earnings of the main line and the annual income may be increased by \$1,000,000 or more. Again, if we appropriate the surplus from the Peking-Tatung line for the construction of the Tatung-Seiyuan Section, it will be of great benefit to both lines.

The above is a summary of the facts about the line as they are and of the plans to be carried out in the future. If we take into consideration the facts of the line being one constructed with our own capital, the officials in charge being chosen by our own Government from among our own countrymen, the entire line lying in the extremely cold region of the northwest, having only six months in the year available for work on a large scale, we cannot but credit the officials in charge for their energy and enthusiasm in carrying out such a great engineering project, with the different parts of the work so properly laid out and at an expense so cheap. I beg to suggest that those officials who have rendered their services on this occasion be rewarded according to their respective merits so that they may be more encouraged in the future. Whether this can be done remains at your discretion.

Peking-Kalgan-Tatung Railway.

REPORT FOR THE YEAR FROM JUNE 30, 1913, TO JUNE 30, 1914.

In his report for 1913-14 the Managing Director of the Peking-Kalgan-Tatung Railway (Mr. Kuan Mien-chuen) explains that with the introduction of accounting forms, as arranged by the Committee for the Unification of Accounts, accounting work has been more accurate since 1913. In April, 1914, the Revenue Account of the Railway was transferred from the Traffic

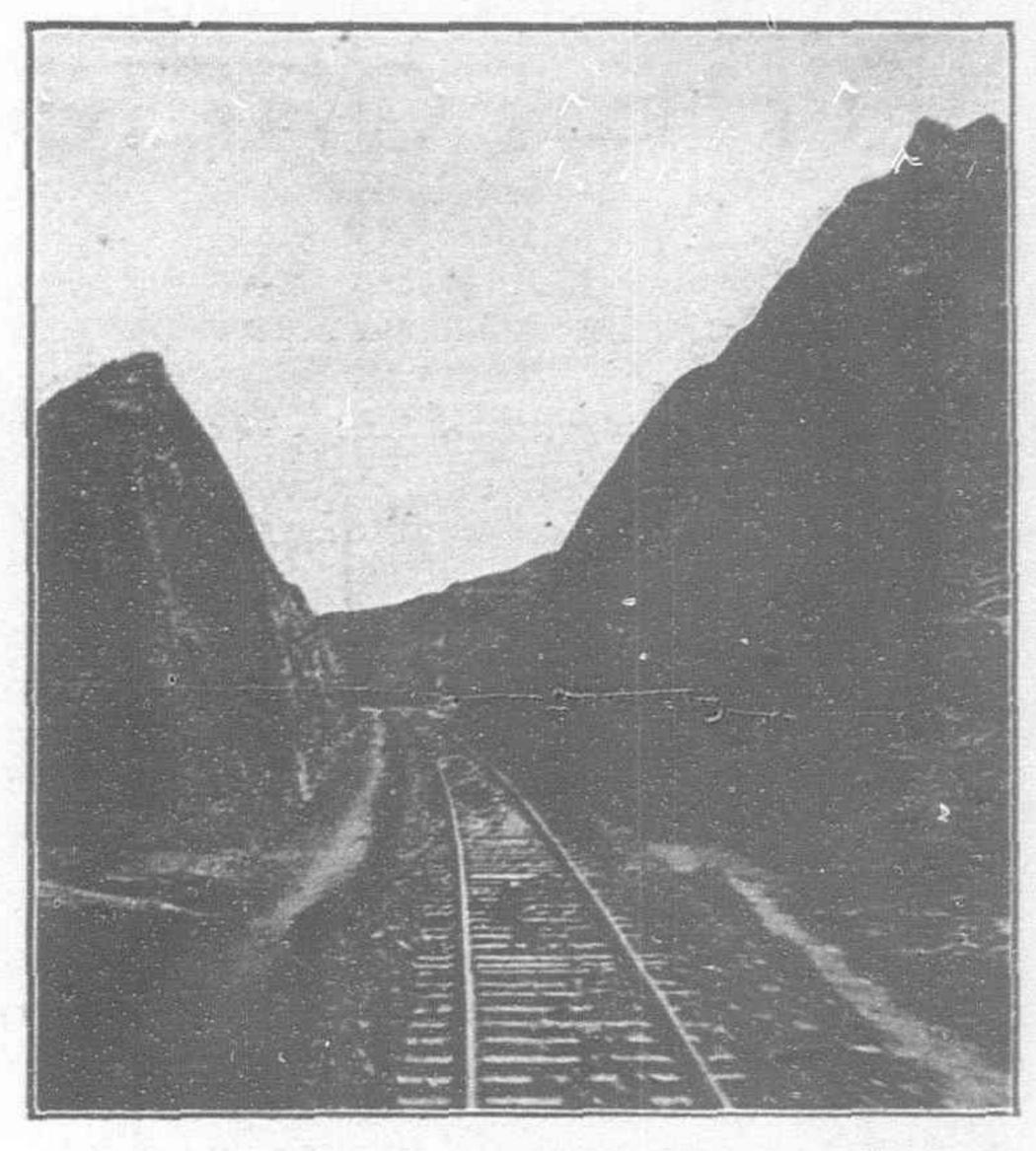
Department to the Department of Audit and Accounts in order to conform with the newly introduced uniform rules.

Owing to unfavourable conditions goods traffic was not so prosperous during the year under review, though the receipts on the Peking-Kalgan section exceeded those of the previous year by \$430,000. This may have been due in a sense to the abolition of the likin tax at Fengtai station (the junction with the Peking-Mukden line), an action which also beneficially affected both the Peking-Mukden and Peking-Hankow Railways.

Owing to financial stringency the engineering work on the Chang-sui (Peking-Tatung) Extension could not be fully

undertaken. The main bridge was built over the Yu-ho, at Tatung, and the engineering work was extended from Tatung to Fengchen, the cost amounting to \$1,490,000, which was charged to capital account. The traffic receipts Kalgan and tween Tatung were \$23,000 less than in the previous year on account of this section being only partly opened for traffic.

The following figures are included in the annual report:—

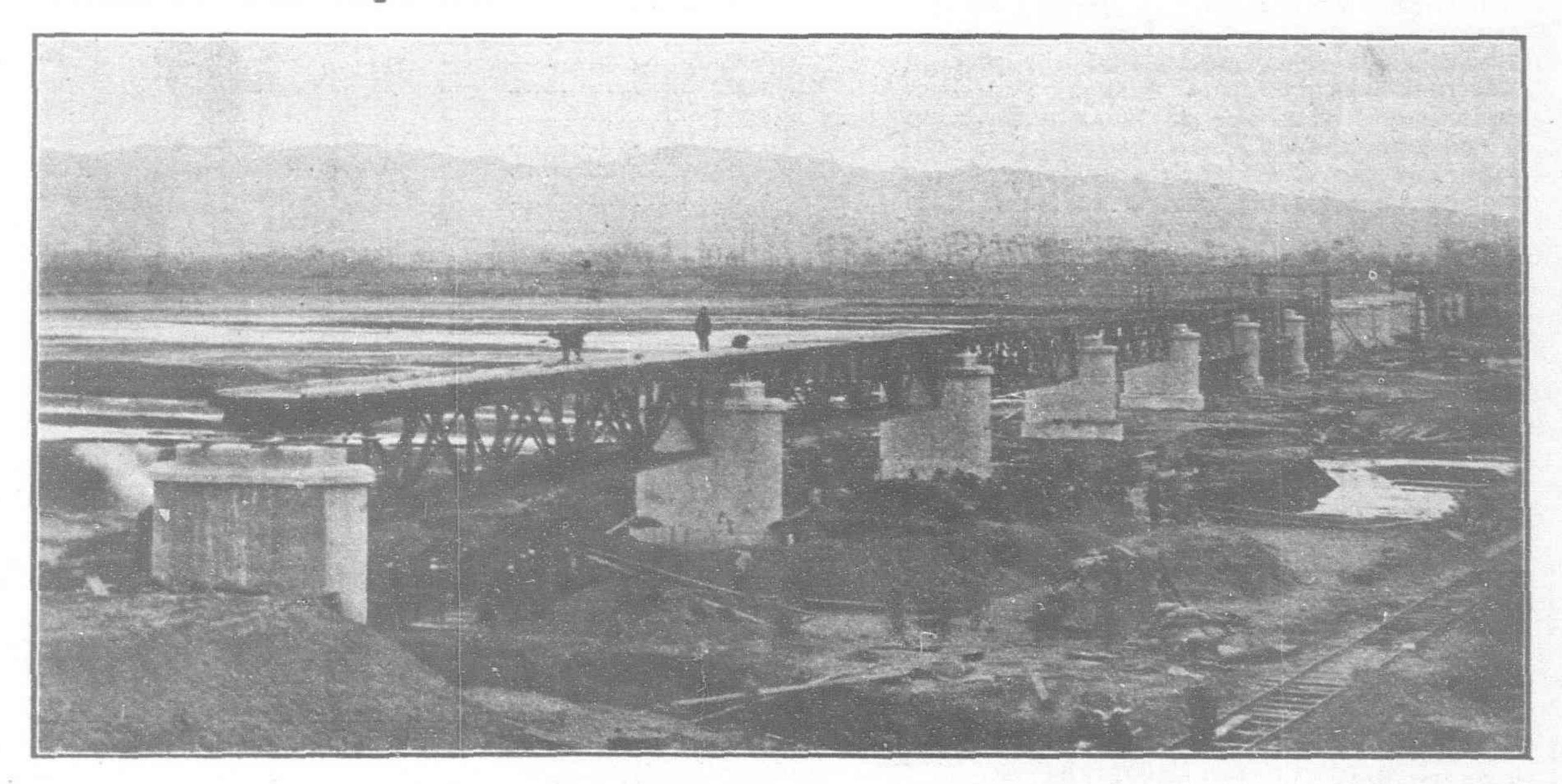


Cutting through Rocks along the Yang River

The Kalgan-Seiyuan Railway.

TABLE SHOWING THE COMPARISON OF THE MAIN ITEMS
OF ACTUAL AND ESTIMATED EXPENDITURE FOR
THE CONSTRUCTION OF THE LINE FROM
KALGAN TO TATUNG.

	Estimated	Expenditure	Actual Ex- penditure in excess of es- timated Ex- penditure	penditure less than es-
	\$	\$	\$	\$
General Direction	1,022,870	1,312,840	289,970	
Preliminary Expenses	307,280	157,380		149,900
Purchase of Land	398,240	365,150		33,090
Road Foundation	2,418,580	1,028,860		1,389,720
Bridges	2,149,300	2,089,500		59,800
Protection of the line	14	11,000	11,000	
Telegraph and Telephone	6,500	83,000	18,000	
Track	2,223,600	2,033,550		190,050
Station and Buildings	259,300	415,000	155,700	
Rolling Stock	1,179,400	1,107,000		72,400
Total	10,023,570	8,603,280	474,670	1,894,960
	1,	420,290	1,	120,290



Building Bridge Across the Yang River-Now Completed

THE FOREIGN TRADE OF CHINA FOR 1914

From Report by F. E. Taylor, Statistical Secretary, Chinese Maritime Customs.

Notwithstanding the difficulties to be overcome after the tremendous upheaval of 1911, when the whole government of the country was temporarily disorganised, followed in 1913 by a serious rebellion against constituted authority that destroyed credit and paralysed trade over a large tract of territory, the year 1914 opened with more favourable prospects, and there was evidence that Chinese merchants were gradually regaining confidence in the stability of the Central Government, says the Statistical Secretary of the Chinese Maritime Customs in his Abstract of Statistics for 1914. There was every reason for such confidence. The provincial officials had been working hard to restore order, and provincial nnances had been improved to such an extent, that most of the provinces had become selfsupporting. The most striking evidence of confidence in the Government was the success of the internal loan of \$24,000,000, which was actually oversubscribed, in extraordinary contrast to all previous attempts to float domestic loans. The deplorable state of the currency, which had become a very serious obstacle to trade, not only was recognised by the Government, but the people themselves assisted to some extent in clearing up the confusion. The country was flooded with depreciated paper money, mostly issued during the early months of the Revolution. In Canton the depreciation had proceeded so far that I paper dollar was worth only 34 cents, until in July the Government redeemed notes to the value of \$31,000,000 at a discount of 50 per cent. In Szechwan the Government accepted salt revenue in the shape of depreciated notes with the object of burning them-a course which raised the value of paper money to par and at the same time enabled the Government to fix the regular quota to be paid in future.

Currency and Finance

The inconvenience of having a variety of dollars in circulation, issued by different Mints and each having an exchange value of its own, has to a certain extent been relieved by the people, who have shown their preference for sycee (Silver ingots) and reconverted enormous quantities of dollars into bullion. It is hardly necessary to point out that a continuance of this process will-prove quite useful in assisting the establishment of a Government standard coin. The issue of paper money has now been brought under control, and there is reason to hope that the reform of the currency, perhaps the most important reform needed, will before long become an accomplished fact. The outbreak of the war in Europe prevented the conclusion of the loan under negotiation with the Quintuple Group which was destined partly to serve this purpose, but the difficulty of obtaining funds from outside led the Chinese to make more strenuous efforts to solve their financial problems at home, and the increased revenue derived from salt, under the able direction of Sir Richard Dane, and the success of the internal loan, together with the absorption of the premium bonds issued through the Hsin Hua Savings Bank, may be taken as evidence of the potential resources of the country at the disposition of a Government in which the people have confidence.

When the year opened exchange was favourable to imports and clearances had greatly improved, while at the same time exports did not appear seriously impeded. Trade continued brisk until April, when it became very dull; but notwithstanding this the Customs revenue at the end of June showed a gain over the previous year's collection to the same date of Hk. Tls. 889,200, in spite of a shortage in opium duty and likin of Hk. Tls. 1,192,782.

As regards climatic conditions, crops were fairly satisfactory; but in Kwangtung during the summer vast tracts were inundated along the West and North Rivers by floods that devastated 15 districts, causing extensive damage to property and crops and involving much loss of life. Crops, such as beans, groundnuts, and sesamum, were also extensively damaged, and in some cases totally destroyed, by floods in North Kiangsu. In September parts of Manchuria, after a prolonged drought, were also visited by disastrous floods. Hurtful as were these floods, it is possible that their injurious effects on commerce were small as compared with the paralysis of trade brought on by the ravages of a brigand who called himself White Wolf. Many towns were looted, before White Wolf was killed on August 5, near Lushan, in Honan. During his destructive career White Wolf practically stopped all trade in the neighbourhood of his operations, as it was impossible to move either money or goods.

Unfortunately, his suppression was succeeded by the outbreak of the great war, the effects of which were immediately felt in China, and exports could no longer be financed. Later, when conditions became more settled and cargo was offering, the German and Austrian flags had disappeared, much British and French tonnage had been engaged by their Governments, and neutral steamers had found more profitable employment elsewhere; so that there was such a scarcity of tonnage that in spite of willing buyers and sellers the cargo could not be accommodated. Naturally, in the absence of competition, freights went up, and heavy war risks assisted in reducing possible profit. Moreover, the prohibition of code telegrams, which was carried out without the slightest consideration for the needs of trade, had the

effect of stopping any new business, as foreign exporters were unable to explain to their correspondents at home, at reasonable expense, the opportunities for new business brought about by war conditions; and the Chinese, unable to dispose of their products, were obliged to curtail their purchase of imports.

With so many drawbacks to healthy commerce from the commencement to the end of the year, it is not surprising that the Customs revenue failed to maintain the advance made to the end of June and that the year ended with a collection smaller by Hk.Tls. 5,052,328 than in 1913. It was, however, larger than in any year previous to 1912, and the greater part of the decrease is accounted for by a loss in opium duty and likin amounting to Hk. Ils. 3,108,680, leaving only Hk. Tls. 1,943,648 (£265,-227) as the reduced collection on general trade.

While the impossibility of obtaining money from abroad, in consequence of the outbreak of war, had the good effect of leading the Chinese Government to rely more upon the national resources, it unfortunately interfered very seriously with railway development. It has already been abundantly proved that railways are causing a rapid extension of trade, and it is much to be regretted that the completion of those under construction must now be delayed, so that the revival of trade after the war will not be facilitated by them until a later date.

A few remarks reviewing the general trend of trade will probably be of more interest than a detailed examination of what has occurred during a year of such abnormal conditions, and it may be useful to show in tabular form the value of the trade in silver and sterling from 1891 to 1914.

Value in Silver and Sterling of the Foreign Trade of China, 1891 to 1914.

Year.	Average Exchange.	Impo	orts.	Expo	orts.
	s. d.	Hk.Tls.	£	Hk.Tls.	£
1891	4 11	139,661,186	34.333.375	100,947,849	24,816,346
1892	4 41	140,298,086	30,544,061	102,583,525	22,333,288
1893	3 114	149,928,703	29,517,212	116,632,311	22,961,986
1894	3 28	163,897,525	26,206,530	128,104,522	20,483,379
1895	3 34	172,853,145	28,268,688	143,293,211	23,434,411
1896	3 4	209,106,866	34,851,143	131,081,421	21,846,903
1897	2 113	204,554,227	30,470,055	163,501,358	24,354,889
1898	2 108	217,761,975	31,416,701	159,037,149	22,944,422
1899*	3 08	280,907,296	42,282,402	195,784,832	29,469,696
1900†	$3 1\frac{1}{4}$	223,791,888	34,734,365	158,996,752	24,677,621
1901	2 II ₁₆	280,472,693	41,559,625	169,656,757	25,139,243
1902	2 75	335,601,739	43,628,226	214,181,584	27,843,605
1903	2 73	343,300,115	45,296,542	214,352,467	28,282,616
1904	2 10%	348,603,090	49,966,442	239,486,683	34,326,424
1905	3 010	358,340,485	68,942,047	227,888,197	34,378,183
1906	3 3 2	414,184,061	68,167,793	236,456,739	38,916,838
1907	3 3	422,838,531	68,711,261	264,380,697	42,961,863
1908	2 8	396,261,991	52,834,932	276,660,403	36,888,053
1909	2 716	417,586,237	54,264,460	338,992,814	44,051,410
1910	2 815	462,437,260	62,260,433	380,833,328	51,273,653
1911 ‡	2 81	473,517,685	63,628,938	377,338,166	50,704,816
1912	3 05	471,809,192	72,000,048	370,520,403	56,542,957
19138	3 01	570,064,611	86,103,508	403,305,546	60,915,941
1914	2 84	546,425,296	74,564,285	345,280.874	47,116,453

† Boxer outbreak.

& Rebellion in summer.

It is interesting to observe in this table that an increase in silver values does not always mean an increase in trade when measured in sterling. For instance, it will be seen that an increase of 10 millions of taels in the value of imports between 1891 and 1893 showed a loss in sterling value of over 4 millions of pounds. By 1898 the silver value of imports had risen by 78 millions of taels, but the sterling value was still 3 millions of pounds less than in 1891. The same condition applies to exports, a rise of 58 millions in silver values between 1891 and 1898 showing a loss in sterling of 2 millions of pounds. In 1899 the influence on trade of railways began to be marked, and, with the exception of the set-back caused by

the Boxer outbreak, the values have never receded to the figures of the years previous to 1899. The sterling values of both imports and exports during 1913 were two and a half times the values of 1891, notwithstanding the disturbance to trade caused by the Revolution in 1911 and the rebellion of 1913. In silver values the trade, both imports and exports, was four times as much.

The table of imports is curiously illustrative of the conditions prevailing in the country and of what the trade really means. The Chinese are now, assuming the population to amount to 400 millions, purchasing foreign products to the value of about 3s. 9d. per head per annum. Of this not very extravagant expenditure about 1s. 3d. is spent on cotton goods, leaving 2s. 6d. to be judiciously laid

out on necessaries, such as metals, coal, kerosene, matches, rice, and sugar, or on luxuries as birds' nests, cigarettes, opium, soap, and elephants' teeth. The tentative adoption of Western culture is to be traced in the importation of railway plant, electrical materials, telegraph and telephone appliances, machinery for various purposes, printing and lithographic materials, and paper; while the craving for personal adornment, not always wisely directed, finds satisfaction in the purchase of foreign hats, shoes, and clothing, haberdashery, hosiery, lace and trimmings, lookingglasses, perfumery and cosmetics, and aniline dyes. Houses of the wealthy are now made bright with window glass and kerosene lamps, furnished with clocks, enamelledware, and gramophones, and made beautiful with elegant

drawing-room suites and radiant carpets. But for centuries the Chinese have found their own products sufficient for their needs, and the sluggish advance in the importation of foreign goods is due to the fact that a demand has to be generated by introducing novelties to potential purchasers and arousing their interests and widening their wants-a very slow process in a country where the means of communication are so defective. When, however, the Chinese are offered an article that fills a want and is easily disposed of, the demand for it increases by leaps and bounds. The table that follows will show what is meant, the blank spaces being understood to mean, not that there was no import, but that it had not attained sufficient importance to be separately recorded.

China's Imports, Showing Advance in Certain Items Since 1870

	1870.	1880.	1890.	1900.	1910.	1913.	1914.
Cotton Goods	22,037,717	23,382,957	45,020,302	75,606,360	130,682,634	182,419,023	178,259,04
Metals & Minerals, ,,	3,996,279	4,079,196	6,872,084	9,178,452	18,907,802	28,973,156	28,420,632
Candles ,,	***	43,547	59,878	356,110	949,464	579,787	808,687
Cigarettes,	***	***	16,690	1,011,653	6,902,246	12,589,300	13,321,616
Coal Tons	78,405	214,421	306,027	864,158	1,443,896	1,690,892	1,600,954
Condensed Milk in tins	***	***	37,283	112,194	325,397	483,720	522,584
Dyes, AnilineValue, Hk. Tls.		* * *	889,619	1,696,628	2,718,438	5,401,820	3,250,305
Electrical Materials,	4 2 4	* + *	17,091	118.216	1,387,267	2,322,339	2,726,394
Flour,	17,535	140,990	775,548	3,329,868	3,444,407	10,300,612	9,150,310
Kerosene Galls.	281,004	3,429,423	30,828,724	83,580,024	161,389,583	183,984,052	225,464,201
Leather Piculs	412	3,673	7,716	14,815	59,926	109,295	91,056
Matches Gross	119,393	1,419,540	4,146,895	9,274,108	24,727,231	28,448,155	20,408,313
Needles Mille	463,473	1,933,944	2,286,748	2,813,980	5,117,586	4,929,710	2,466,182
Rice Picu/s	141,297	30,432	7,574,257	6,207,226	9,409,594	5,414,896	6,774,266
SoapValue, Hk. Tls.	***	62,136	193,309	753,289	1,884,658	2,684,511	2,529,972
Sugar Piculs	232,824	57,382	209,121	1,291,289	4,311,328	7,111,728	6,080,484
Timber	272,150	591,836	834,148	1,034,567	4,266,033	5,111,497	6,251,781

One very interesting point in this table is the proof it gives of the undeveloped state of the national resources. China grows cotton of excellent quality, but included in the cotton goods (in 1913) is cotton yarn to the value of Tls. 71,060,089. The next article to notice is coal, of which the Chinese import more and more, although they have an inexhaustible supply in their own deposits. There should be no need to import flour or rice, and a large proportion of the timber imported, three-fourths of it being softwood, could be grown in the country if deforestation were checked. It will be seen that the increase in the quantities of metals imported gives no indication of progress in mining development. Another point worth noticing is that cotton yarn, cigarettes, matches, candles and soap are now being largely manufactured in China, without in the least affecting the importation. For the Chinese market the first essential is cheapness, and the Japanese have an advantage over their Western conpetitors in already producing for home consumption articles of a type and quality suited to the pockets and needs of their neighbours. Among such goods may be mentioned knitted undergarments, both of summer and winter weights, brown for men and pink for women being preferred to white. Stockings and socks are in increasing demand, but must be low in price, while cotton umbrellas are taken in large numbers. Other articles that command a ready sale are looking-glasses, spectacles, bottles, thread, buttons, tooth brushes, handbags and purses, india-rubber balls as toys, ankle-binding tapes of either cotton or silk, enamelled ironware, hair clippers, clocks and watches, crockery, etc. Where water carriage is available transportation is inexpensive, but away from the waterways it becomes costly and very slow, except along the few railway routes. Consequently no marked increase in imports is to be looked for, as was remarked above in the case of exports, except in conjunction with railway development.

The following particulars regarding the trade during 1914 are founded upon the quarterly memoranda on trade received from the ports.

In Manchuria trade was fairly satisfactory, notwithstanding a rainy season of abnormal length and floods that caused considerable damage; but the export of cereals to Korea was less than usual, owing to excellent crops in that country, while the war interfered with the demand for wild silk. The crop of beans was abundant and the export improved. A new article for export was found in talc, of which large quantities are produced near Haicheng and which is said to be of good quality; during the year 3,600 tons were sent away from Dairen. Cement also, to the amount of 60,000 tons, was shipped to Java, and further shipments were to be made. At the instance of the Japanese and Chosen (Korean) Railways, a reduction of freight of 30 per cent, on II kinds of through cargo carried by the Antung-Moukden line, including cotton piece goods and yarn, was inaugurated by the South Manchuria Railway on the 1st May. A similar reduction, in favour of steamer-borne cargo, was extended to the same goods when carried by the Dairen-Moukden and Newchwang-Moukden lines. Leading Japanese exporters of cotton goods to Manchuria have organised a Japanese Cotton Exporters Association, the declared object of the Association being to enhance the reputation of Japanese cotton goods in Manchurian markets by stopping the export of goods of inferior quality and to maintain standard prices. These factors, combined with the Agreement of the 29th May, 1913, under which dutiable goods imported into Manchuria from or through Chosen, and exported from Manchuria to or through Chosen, by rail via Antung, are allowed a rebate of one-third of the tariff duty, have had a marked influence in encouraging the trade in Japanese cotton goods at the expense of British and American manufactures.

At Tientsin the year opened with apparently bright prospects, and it was noticed that British and American piece goods were making headway against Japanese competition, probably assisted by a high and steady exchange. Under the heading of cotton yarn the Indian variety showed a larger pro rata increase than the Japanese; but after the middle of the year this state of affairs was completely reversed. Shirtings, sheetings, and drills from England

and America all fell off, while Japanese drills and T-cloths came forward in large quantities. Japan matches and machinery also showed large increases. The export trade was fairly satisfactory, but was impeded for a time by the unrest in Mongolia. Production was good, but the war closed certain markets and at first exports fell off seriously. After the reduction of Tsingtau trade revived surprisingly. At Chefoo, also, a prosperous year was anticipated, but, except for a brisk business in Japanese cottons and matches, the trade became very stagnant.

The Yangtze was unusually low during the summer, and this meant a great advantage to farmers along the banks, as an enormous acreage generally submerged was available for cultivation. Generally speaking, the crops along the valley were good, and, so far as climatic conditions were concerned, the year should have been one of brisk trade. But in Szechwan the roads were made unsafe by roaming bands of robbers, preventing the free transit of goods and compelling senders of silver to provide an escort. The silk crop in Szechwan was particularly good and prices were high early in the year, but the war stopped demand and many dealers were ruined. Chinese-milled flour, and Chinese-made cotton piece goods and matches entered more into competition with imported goods, and a development in this direction is to be looked for. In Wusih the silk crop was disappointing, and cocoons fetched abnormal prices. The cotton crop was excellent, and low prices assisted the local mills.

Turning to the more southern ports, it appears that rice was plentiful and cheap. The European war, by sending up prices, caused consumers of Western manufactures to give up, wherever possible, the use of such goods—an opening that the Japanese were not slow to take advantage of. Japanese kerosene from Formosa made its appearance for the first time. Mr. R. J. White, of the Canton Customs, gives some interesting particulars of the rise in the prices of imports and the fall in the prices of exports since the commencement of hostilities in Europe. Among imports, paper rose from 40 to 60 per cent.; aniline dyes, from 60 to 100 per cent.;

sugar, 50 per cent.; matches (in consequence of the shortage in German materials, chlorate of potash, and phosphorus), 60 per cent.; sundries, from 10 to 15 per cent. Among exports, silk fell \$200 per picul; waste silk, about 25 per cent.; bristles, about 20 per cent.; hides, 15 per cent. There was no demand for human hair, and very little for matting and cassia. As regards the fall in the value of silk, a brisk demand from America towards the end of the year brought about a certain recovery. The country around Canton was much disturbed by brigandage and piracy. The floods caused by the West River, which rose 38 feet in 48 hours and in the course of five days rose from 18 to 72 feet, resulted in immense damage and distress, and the closing of certain of the European markets, sent down prices and checked exports.

Drought Checks Imports

At the frontier ports trade was quite satisfactory until the autumn, when a prolonged drought affected the rice crop and sent up the price from \$4.80 to \$12 per picul. The export of tin, one of the principal products, was checked by low prices during most of the year. A report from Tengyueh makes out a strong case for the construction of a railway from Bhamo to serve the transfrontier trade, which has increased of late to a surprising extent.

The value of the direct foreign trade was Hk. Tls. 902,389,922, a falling off of Hk. Tls. 71,078,181 as compared with the value of 1913, but exceeding that of all previous years. Net foreign imports decreased by Hk. Tls. 13,053,-509 only, but exports showed a decline of Ilk. Tls. 58,024,672.

The net quantity of opium imported, that is, released from bond for consumption after payment of duty and likin, was 7,478 piculs, as against 18.138 piculs in 1913. The latter quantity was valued at Itk. Tls. 41,023.C12, and the reduction in consumption to less than a half did not result in much saving, as the value of the smaller amount was estimated at Hk. Tls. 37,344,653, prices having risen considerably towards the end of 1913 and having remained steady throughout 1914. The year opened with 14,529 chests in bond and in Hongkong, which it was expected would, including duty-paid stock in the hands of dealers, be all disposed of during the year, assuming that the demand would continue at the same rate. But the increased severity of the Government restrictions on smoking reduced the consumption to about one-half, and the year closed with 5,38123 chests in bond in China, 1,917 chests in Hongkong, and 18 chests afloat between Shanghai and Hongkong. When this stock is exhausted the trade in Indian opium will be a thing of the past. Enormous prices now are paid, and it is interesting to note, as a comparison, that in 1906 an importation of 54,225 piculs was valued at Hk. T!s. 32,285,377, which shows that the limitation of supplies has raised the price of the drug more than eightfold. During the year Fukien, Honan, Hupeh, and Chekiang were added to the provinces into which, as being free from poppy cultivation, the importation of foreign and Chinese opium is forbidden under the Anglo-Chinese Opium Agreement of 1911.

American Cottons Decrease

The value of cotton goods imported fell from Hk. Tls. 182,419,023 to Hk. Tls. 178,-259,045, that is, taking the average rates of exchange for 1913 and 1914, from £27,552,873 to £24,324,932. The year was a bad one for this trade and commenced with prices that were below the cost of replacement, but a fairly high exchange made importers hopeful of improvement in conditions. Unfortunately, stocks were heavy and restriction of credit by the Chinese banks placed great difficulties in the way of the dealers. With the approach of the Chinese New Year, however, the demand became imperative and a very brisk business set in. There was considerable development in the local cotton industry, almost all the mills

having largely added to the number of their spindles, and there can be no doubt that both yarn and cotton piece goods will, in the future, feel more and more the competition of Chinese manufactures. A very significant feature of the cotton trade during the year was the large advance made in certain classes of Japanese goods at the expense of similar makes from America and Great Britain. In grey sheetings, for instance, while Japanese rose from 3,397.362 to 4,499,433 pieces, American fell from 1,668,716 to 870,200 pieces; Japanese drills rose from 1,677,111 to 2,190,155 pieces, while American fell from 525,291 to 145,719 pieces and English from 85,708 to 45,671 pieces. Japanese yarn has now reached 1,331,739 piculs, which was 194,515 piculs more than Indian yarn.

Woollen goods fell off about 32 per cent., and it is quite evident that the Chinese have not yet decided to discard their own comfortable and suitable style of dress and to follow foreign fashions.

Metals remained about the same as in 1913. Among sundries, the effect of the European war was shown in a reduced importation of various articles from the Continent. Aniline dyes fell from Hk. Tls. 5,401,820 to Hk. Tls. 3,250,305; artificial indigo, from 319,575 to 250,127 piculs, a difference in value of a million taels; window glass, which mostly comes from Belgium, more than doubled in price, and the importation fell from 311,950 to 253,168 boxes. Only about half the quantity of needles, as compared with 1913, arrived. American kerosene oil made a further advance, from 112,459,925 to 160,428,389 gallons, and the new Japanese product, which is cheaper but inferior, rose from 34,265 to 514,470 gallons. Russian and Sumatra oil remained about the same. All classes of sugar felt the effects of the war and were imported in smaller quantities on account of the increased demand in foreign markets, caused by the shortage in beet sugar, which sent up prices. Brown sugar fell from 2,277,593 to 1,786,671 piculs; white sugar, from 1.933,067 to 1,628,211 piculs; refined, from 2,627,907 to 2,487,654 piculs; and sugar candy, from 273,161 to 177,948 piculs. The lloilo sugar is said to be increasing in favour, as it resists best the effects of heat.

Silk Suffers Severely

One of the first exports to feel the effect of the war, and the one that was most severely affected, was silk. During the first half of the year exports of silk had been fairly satisfactory, though not particularly brisk. With the opening of the new season the prices of cocoons in the districts serving Shanghai became abnormally high. With the outbreak of war all exports ceased, and most of the filatures had to stop work from want of capital. Foreign merchants were in some cases unable to take up their contracts, as it was impossible to finance shipments. The same conditions prevailed in Canton, where prices fell from \$700 or \$800 to \$200 in August, but recovered later. The Bank of China and the Bank of Communications assisted traders by making large advances. From October onwards there commenced a demand from America, as well as inquiries from London and the Continent, which caused some improvement; but at the close of the year the market was still very dull. The values of silk and silk products exported fell from Hk. Tls. 104,852,141 in 1913 to Hk. Tls. 79,561,667—a loss to China's trade of nearly 3½ millions of pounds sterling.

The tea trade was practically finished before the war commenced and was not affected as were other exports. Black tea improved by 9,492,000 pounds, but there was a somewhat smaller quantity of green tea exported. The demand from the United States and Canada was larger, and Europe took more black tea than in 1913, but required less green tea. Although there was this small increase in the quantity of black tea exported, the export was below that of any previous year except 1913, 1905, and 1906;

and it is quite evident that the bulk of this trade, by which is meant all of it with the exception of a small portion represented by the finer qualities, demands the careful consideration of the Government. This has been to some extent realised, and the export duty on leaf tea was reduced from Hk. Ils. 1.25 to Hk. Tls. I from the 1st November. But this reduction will do nothing to help the finer teas and leaves the duty upon the inferior qualities, of which by far the greater proportion of the trade consists, much too high, when taken in conjunction with the likin, to enable them to compete under ordinary conditions with the duty-free teas from India and Ceylon, the trade having for many years declined to the position that the inferior China teas are wanted only when short supplies from India and Ceylon have so raised prices that China teas are worth buying on account of their cheapness. The export of brick tea did not maintain the advance made in 1913. Black brick fell off by 84,038 piculs, and the total export declined by 22,137 piculs notwithstanding an advance of green brick of 61,901 piculs.

Antimony in Strong Demand

Later in the year the demand for antimony became very strong, and the price of crude antimony rose from Hk. Tls. 150 per ton to Hk. Tls. 240, and the supply was insufficient to meet the demand. The export of iron ore increased by 420,000 piculs, but pig iron showed a small decline.

The export of beans, in spite of a temporary stoppage when war was declared, and in spite of the destruction of the crops by floods in the districts serving Chinkiang, actually showed a small increase, rising from 10,323,959 to 11,157,147 piculs. Oils, principally required for the Continent, such as groundnut oil and wood oil, felt the effects of the war; but bean oil, cotton seed oil, sesamum seed oil, and tea oil all improved in quantity. Among seeds while cotton seed and rape seed showed a decided advance, there was a falling off in linseed and especially in sesamum seed, which receded from 2,034.647 to 1,251,180 piculs, although there was a large supply offering. Hides, of course, show reduced figures, as do skins, except that dressed sheep skins were purchased in large quantities. Straw braid fell from 101,037 to 16,648 piculs, a very serious decline, partly due to the absence of statistics from Kiaochow and partly due, it is said, to a change of fashion in Western countries. The total decrease in the value of the export trade amounted to about 14 millions of pounds sterling.

Although the tonnage recorded under Austrian and German flags represents little more than the first half of the year, while British, French and Russian tonnage was largely employed on Government work from the same date, and vessels under neutral flags found plenty of profitable business elsewhere, it will be seen that steamer tonnage increased by 1,855,913 tons and exceeded the record for all other years, rising from 87,613,969 tons in 1913 to 89,469,882 tons. American, British, Danish, Japanese, Norwegian, Portuguese, Russian, and Chinese tonnage all shared in the increase. There was great difficulty in finding accommodation for cargo offering both in Europe and in China, and the consequent rise in freights and the expense of war risks did not tend to encourage trade.

Much (iold Exported

The demand for gold in Europe and Japan and its dearness as compared with silver led to the sale of the former metal by China, and there was an excess of exports over imports of Hk. Tls. 13,000,750, the bulk of the shipments having taken place after the commencement of the war. That gold valued at Hk. Tls. 4.397,531 was sent to America, where the price was attractive, is partly to be explained by the fact that there was no possibility of remitting to Germany by bills

of exchange after the stoppage of German trade. The most convenient way, therefore, of remitting such funds as those required for the service of loans and the Boxer Indemnity was to ship gold to a neutral country where credits could be arranged. Japan took Hk. Tls. 6,198,061, some of which was said to be also destined for America. To Europe there was an export to the value of Hk. Tls. 2,704,447. There is always a small export of gold from China, and the larger export during 1914 was merely due to exceptional circumstances and was not brought about by the necessity of adjusting the balance of trade.

Regarding the balance of trade it has been customary to give certain estimates of liabilities and assets, intended to show how the excess of imports over exports is paid for. This has been done because among the Chinese, including even the editors of certain newspapers, there are those who profess to believe that commerce with foreign nations is ruining their country and draining it of silver; and in proof of it they point to the fact that for many years the balance of trade has, as shown by the Customs statistics, been against China. It may cause such persons a shock to see that an adverse balance of 103 million Haikwan taels in 1912 and of 167 million Haikwan

taels in 1913 have now been followed by one of 212 million Haikwan taels. The plausible conclusion is that silver must be flowing out of the country to pay for the excess of imports. But when the recorded movements of silver for these three years are examined, it is found that the net import of silver, that is, the excess of imports over exports, has amounted to Hk. Tls. 41,594,067, while the stocks of silver in the local banks are so large that they cannot be made use of. Hongkong has also to be taken into consideration. There are no official figures available, but, so far as is known, in 1914 the imports of gold exceeded the exports by nearly 6 million dollars, while the imports of silver exceeded the exports by over I million dollars. These facts make it quite clear that the balance of trade is not adjusted by the export of treasure, and justify the statement made by Mr. Morse in 1905 that China's liabilities are balanced by the assets.

What these assets amount to can only be very roughly estimated, but it is evident that they are sufficient. Among them may be mentioned remittances from and money brought in by Chinese emigrants; money expended by foreign Governments for the maintenance of garrisons and warships, including the sums spent by the men;

expenditure on foreign Legations and Consulates in China; expenditure on foreign missions, hospitals, schools, etc.; expenditure on the maintenance of foreign merchant vessels and on repairs to the same; expenditure by foreign travellers; excess of exports over imports in the unrecorded trade across the land frontiers; and so on. There is, moreover, reason to think that the Customs valuation of exports is generally too low. Finally, it may be pointed out that the result of intercourse with foreign nations has led to a large industrial development that is increasing every year, and that China now possesses not only railways and mines, but cotton mills, albumen factories, cement and brick works, chemical works, distilleries, docks, shipbuilding and engineering works, electric light works, flour mills, match factories, oil mills, paper mills, sawmills, silk filatures, smelting works, soap and candle factories, and many other industrial establishments. So far from foreign trade impoverishing the country, China is growing richer every year in consequence of the development of her resources—a development that will progress with rapid strides with the expansion of the railway system, the establishment of a standard currency, and the abolition of taxation on goods in transit.

A New Mechanical Filter

For many years Messrs. Mather & Platt, Ltd., have been engaged in the construction and installation of large sized pressure filters for public or industrial purposes, and the firm is responsible for some of the largest plants for the filtration and purification of water at home and abroad. With the view of meeting the requirements of comparatively small users, Messrs. Mather & Platt have now placed on the market a new type of filter specially designed to fulfil the conditions met with in water supply of Public Institutions, Country Mansions, Tea and Rubber Estates, etc., where a cheap and efficient plant for the purification of the water supply is just as much a necessity as in the case of Municipalities and large works.

The new filter is constructed on the mechanical principle which has achieved such satisfactory results in the larger sizes. The old fashioned method of purifying water was by means of sand beds. The passing of water through a bed of sand is, however, not in itself effective for intercepting and destroying bacteria. This is accomplished in the case of open sand filters by allowing the water to run for a considerable period, forming a natural gelatinous film on the surface of the bed. With mechanical filters this film is formed by the addition of a solution which coagulates the fine particles in the water. Messrs. Mather & Platt have recently patented an apparatus for passing into the water supply an exact percentage of the required coagulant, the percentage remaining the same irrespective of the quantity of water passing through the apparatus.

In the new filter the water enters at the top and after percolating through the filtering media, passes through the nozzles into the cast-iron base, and is delivered through the clean water pipe and valve. A special feature is the design and arrangement of nozzles which are fitted into the base. They are made of phosphor bronze with copper perforated domes, and give even distribution over the whole bed both when filtering and during the washing operation. They are screwed in from the underside, access doors being provided so that any nozzles may be taken out, examined and replaced without disturbing the filtering medium.

For supplying the coagulating solution, a small copper tank is provided which normally holds one day's supply; this tank is secured to the pipes as an integral part of the filter. It is fitted with special valves, a sight glass and

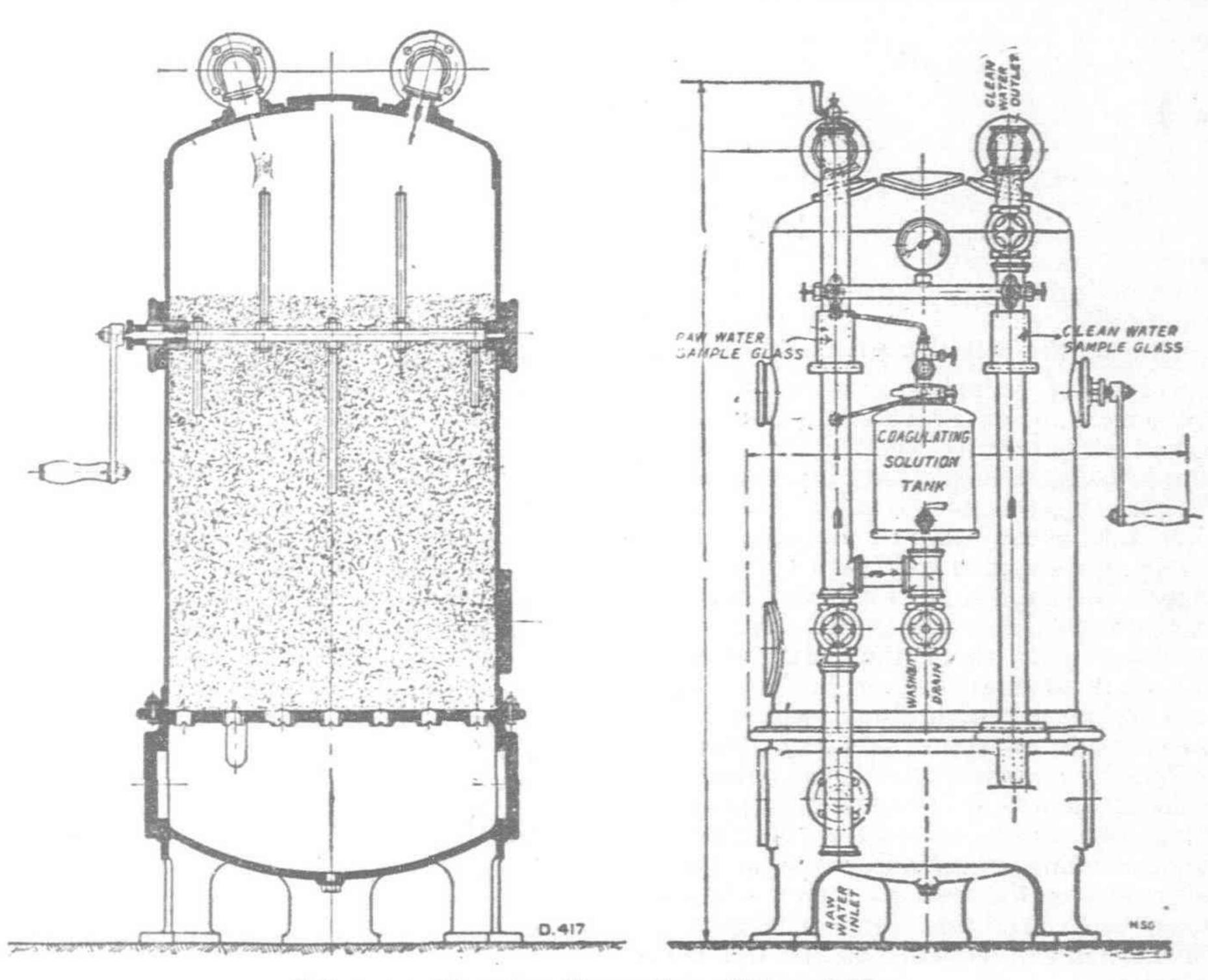


Diagram Showing Operation of New Filter

regulating jets by means of which the required quantity of chemical is admitted to the water. Several of these regulating jets are provided, each to give varying proportions of solution, and when it is desired to change them, one jet can be substituted for another in a few seconds. To control the supply of solution according to the rate of flow, Messrs. Mather & Platt have introduced a special feature in the shape of an adaptation of the Venturi tube which ensures that the supply of chemical shall always be in direct proportion to the water supply. It has no moving parts, the action being purely a hydraulic one and absolutely positive.

The new filter is complete and self-contained. It can be readily transported and erected in any convenient position without special foundations or specially skilled labour. It can be mounted on a motor waggon or other vehicle and, connected to a pump driven off the main engine, enables pure water to be instantly attainable at any time or place where there is a water supply. It is obvious that this would be a great advantage to troops and

gangs of workers engaged in out of the way places where the quality of the water is often very doubtful,

Messrs. Mather & Platt have just issued a catalogue relating to their new small filter. Copies can be obtained on application to Park Works, Manchester.

New Zealand Improving Patea

The Marine Department of New Zealand has approved plans for the improvement of the port of Patea, for which a loan of £86,000, secured by the Patea Harbour Board, has been issued. Tenders are now being invited for the extensions of the existing breakwater in concrete, on the "pierre perdue" system. The contract time to complete the works is four and a half years, and it is estimated that the extension will result in an increase of 50 per cent, in the trade of the port.

Village Industries.

We suppose there is not a reader of this "Review" who does not know something about small industries which have been cultivated in certain countries and agricultural districts, having ministered very considerably to the success and progress of the country in which they have been located. Especially is this the case in the Continent of Europe. All Political Economists of latter days have taught the advantages, morally, physically, and materially, of combining agriculture and some small industry so that a diversity of occupation might be enjoyed by the population and the tendency to monotony, which frequently drags on the vocation of the person compelled year in and year out, to keep his nose down to one grind stone, whether that grind stone be following the plough, or digging the soil, or whether it he shoe-making or toy-making. Now it has been proved, beyond doubt, that this welding together of little industries with farming has brought joy and success to whole nations.

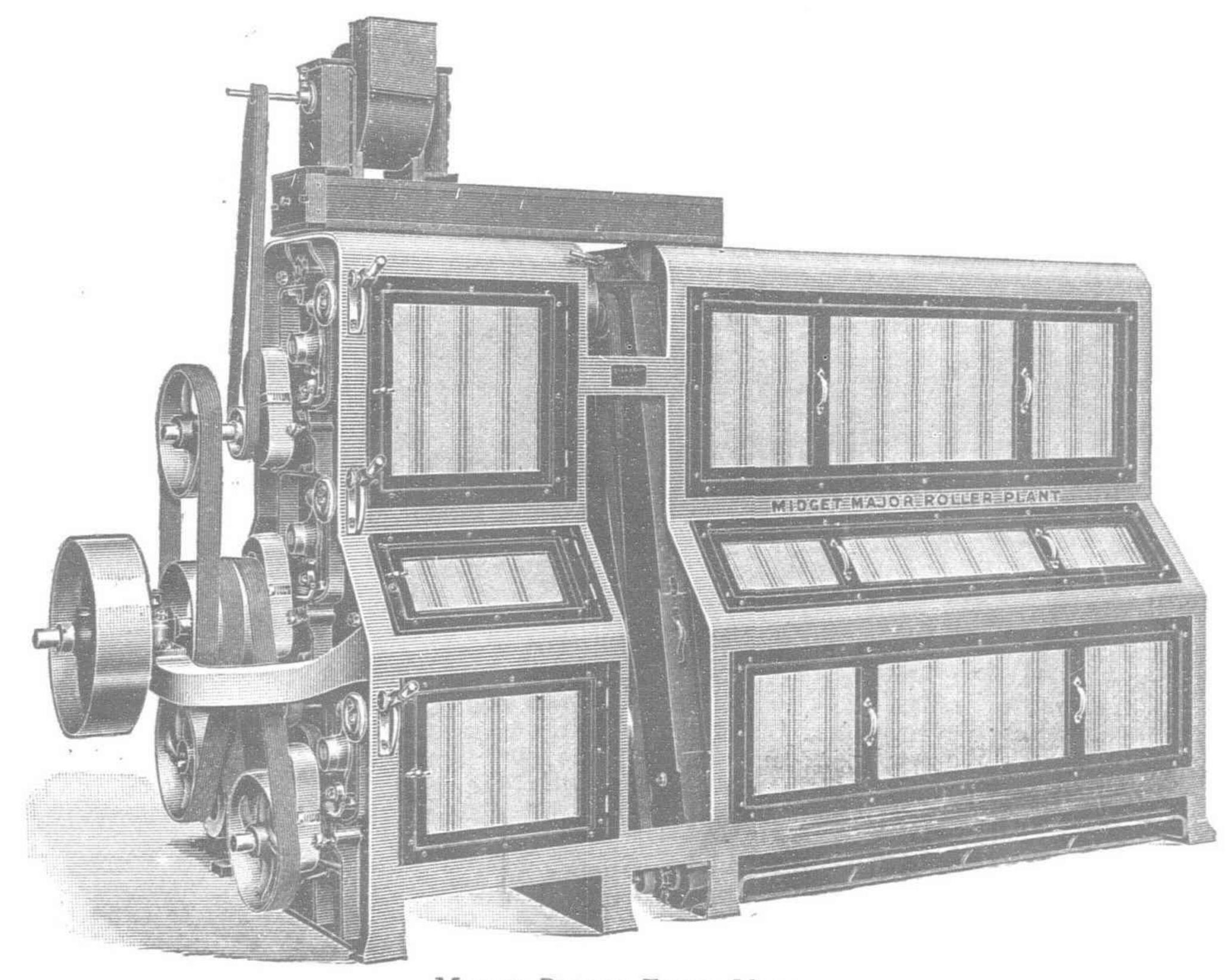
It is, of course, impossible to carry certain industries on successfully on a very small scale, but there are still, without doubt, very many trades which could be well conducted to occupy the spare time of the farmer in bad weather and in slack time between the seasons, which would help him to make a little extra money, and in which trade he could well compete with the largest and best equipped factories, however extensive their scale.

Now it is obvious that the industry most closely associated with agriculture, from time immemorial, has been that of grinding the grain grown on the land. Instances of this dual occupation have been burnished from the most ancient records and it is quite safe to assert that no industry is of greater advantage to a community occupied for the most part with cultivating the soil, than that of the miller.

The process of reducing grain to meal or flour is the most ancient process of manufacture known, and while primitive methods consisting of the most simple utensils, have done very well in ages gone by, the time is coming when the education and the condition of the people calls for greater refinement of food than can possibly be produced by the old style of grinding between the upper and the nether mill stones. Whatever doctors may think about the advantage of grinding some of the bran or husks of the wheat to be mixed with flour, which is an inevitable result of stone grinding, there is unquestionably a growing taste for purer and whiter flour, such as it is possible to produce from the same wheat by means of modern systems, consisting of grinding the wheat in successive stages through a series of steel rollers, so as to produce a more palatable and tasty bread than can be made on the old fashioned process.

Whether we like it or not, the world does not stand still; times change. Improvements are impressed upon us at every turning, and those improvements which relate to the refinement in food products, are inevitably bound to influence mankind most forcibly. The importation of refined flour made from wheat which is creeping into far Eastern life has given even the poor people a taste for better bread than their fathers were accustomed to eat, and if the land proprietor, the storekeeper and the small village miller is going to consider best his own interests for the future, he must provide ways and means for getting the highest commercial value for the wheat grown in his district. Now the spirit of progress and development is spreading rapidly through the countries in which this "Review" circulates, and the time is not far distant when the bulk of the wheat bread consumed must be made of white flour.

The roller flour milling process had its origin, strange to say, in Hungary about the middle of the last century, but it was not until 1875 that it made any serious headway throughout the countries of Europe or in America, but since that time, only a period of say 40 years, has been long enough to completely change the



MIDGET ROLLER FLOUR MILL

system of milling from stones to rollers in the countries named. It would be safe to say that not more than 5% of the wheat in those countries is now ground on anything but a roller process, and this has been done chiefly in large centres where mills have been of a large capacity. Not until about 1900 was the problem of the small miller in relation to the new process fully met by the introduction of a single machine, which, in itself, was capable of performing the whole of the operations of grinding and sifting by gradual stages in one complete frame, and driven by one belt. This machine has been named the "Midget" because of its small size in comparison with the large installations, and it has met with remarkable success in Europe and America. It had its origin in a small village mill in England. It was invented by a miller's son, and has been developed to such perfection during the last 10 years that it is now stated to be so simple in operation and so free from trouble that the uninitiated can work it without previous training. Over 500 of these mills are now at work, and we predict for the machine a ready sale in the Far East when once it gets a footing. The claims made for the machine are as follows:—that from the same wheat as used in the largest and most elaborate mills, it will produce as good flour and as much of it, and it takes less power and is, therefore, a most profitable machine to use. Wherever, therefore, wheat is grown and flour is required for human consumption, this compact little mill is worth all attention. It can be placed on any Hoor and driven with any kind of power, gas, oil, electricity or water. The wheat is first cleaned on a separate machine, and is then fed ' into the top of the "Midget" Mill, and the finished products-flour, bran, etc.,-come off into separate sacks beneath the mill, and are ready for the market. The machine is guaranteed to run for many years without any serious cost of maintenance, and as the principal bearings in it are self-oiling it runs very lightly and takes a minimum of power.

The Agents for this mill in Shanghai are Messrs. Wm. Kay & Co., of 9 Kiukiang Road, Shanghai, who will be glad to give any possible information with regard to this novel machine, and any readers in remote districts who are looking for information would be well advised to address the original makers, who are Messrs. A. R. Tattersall & Co., of 75D Mark Lane, London, E.C.

Purity and Its Relation to Permanence in Metals

BY L. E. KITTLE.

It is a fact long established in the scientific world that pure metals resist the actions of acids to a much greater extent than those which contain foreign substances. The action of solvents seems to be decidedly hastened by the presence of impurities which, even when not of such a nature as to directly promote dissolution, undoubtedly exert an indirect influence by lessening homogeneity and consequent cohesion.

One railroad system in the Orient has recently had a very unsatisfactory experience of copper. The specifications under which the material was bought did not touch upon the chemical analysis of the metal and the result was that copper was furnished which was very far from pure. When exposed to the weather in actual service it very rapidly deteriorated and the whole shipment failed utterly to give anything like the service life which is expected from this comparatively high priced metal.

The discovery of the relation of purity to permanence in metals is of the greatest importance in respect to iron and steel. Iron moves the world in our day. The value of iron and steel products exceeds by hundreds of times that of all other metals and the bringing to light of the fact that iron resists corrosion in proportion to its freedom from foreign substances will no doubt take rank with the foremost triumphs of science and invention.

The attention of metallurgists was drawn to this problem by noting the tremendous difference between the durability of the iron of one hundred and more years ago and the products of modern Bessemer and Open Hearth Furnaces. Chemical analyses of hundreds of samples of the old and durable irons and of modern rapidly-rusting steels disclosed the fact that the latter had nearly always a high content of impurities, especially manganese, copper, and sulphur, whereas the products of our grandfathers' time were very nearly pure iron.

The amount of impurity contained in ordinary steel is so seemingly slight compared with its whole mass that to the untechnical mind

even its practical elimination appears an inadequate reason for a great difference in resistance to corrosion; but we have to remember that in the field of chemistry, as in many another, great effects sometimes ensue from small causes. A very little kerosene will impart a distinct flavor to a considerable quantity of water.

Since the beginning of the present century, adaptations and improvements in the methods of the basic open hearth furnace have enabled the production of iron of an even higher degree of purity than that of a century ago. Experience with this material in the form of corrugated road culverts, roofing, sheet metal work, wire fencing, etc., seems strongly to bear out the claims made for modern pure iron. Of course, no such long time service records are as yet available, as for the old fashioned material. But the use of high purity iron in place of steel for a number of special purposes, where the corrosive conditions are so severe that ordinary iron and steel endure for only a few months, has established a comparative length of service for the high purity iron two to four times greater

The original experimenters in the manufacture of pure iron in basic open hearth furnaces were the makers of the material known as Armco Iron; and this is to-day probably the best example of modern accomplishment in this direction. Manganese, Sulphur, Copper and Carbon, as well as other solid and gaseous impurities are reduced almost to the vanishing point. The evil effects of included gases (which are not shown by chemical analysis) have been practically demonstrated, and great care is exercised in eliminating them. Measures for the production of sound ingots, free from gas inclusions, and which will result in dense and solid metal, include the use of an ingot splitting saw for laying bare to inspection the interior of any ingots suspected of blowholes or of a "gassy" condition, and any heats in which this is found are rejected. Further investigations, however, lead to the conclusion that high purity, while immensely important, is not by any means the only quality to be considered in relation to rust-resistance. Perfect physical evenness is almost, if not quite, as desirable. In fact, the deepest students of the corrosion problem at the present time are substantially agreed that the basis of rust-resistance is homogeneity; and this implies not only the nearest possible approach to one substance, chemically considered, but also the absence of uneven crystallization and of the strains induced in the metal by rapid and careless methods of manufacture.

Asiatic Institute First Pacific Conference

July 19-20, 1915, the Asiatic Institute will hold a conference at San Francisco in connection with the Panama-Pacific Exposition. The object of the Conference is the consideration of conditions in the Pacific with a view to determining the basis for a Congress of the Pacific to be held at a time when the issues of the European War as they affect the Pacific Basin will have been determined.

The object aimed at by the Institute is that of determining what are the common interests of the countries of the two civilizations of the Pacific which can be advanced by mutual consideration and cooperation.

The sessions of July 10th will be held as a memorial to Henry Willard Denison, late adviser to the Japanese Foreign Office. The subject will be: "The Pacific as the Theatre of Two Civilizations." The principal topics considered will be Exclusion—called the Asiatic Question; Conflict of European nations in the Pacific; Ownership and Exploitation of Pacific regions, and Asiatic-American Relations.

The sessions of July 20 will be held as a memorial to William Woodville Rockhill, late

adviser to the President of China. The subject for these sessions will be: "The Pacific as the Theatre of the World's Great Hereafter." The principal topics considered will be: Conditions on which future peace in the Pacific may be secured; National policies in the Pacific; Armament and Military in the Pacific and the Necessities of Humanity in the Pacific.

Those who participate in the discussions will be not only eminent speakers, but persons acquainted with the subjects.

The Duty of Directors and Shareholders

Sir William Mather, Chairman, presided at the Annual Meeting of Mather & Platt, Ltd., on Friday, February 26th, at the Company's Works, Manchester.

Comparing the results of the business during 1914 he said that in his opinion they were very satisfactory. A dividend of 10% on the Urdinary shares plus a bonus of 21% free of income tax had been declared. In arriving at their statement of profit during the past year the Directors had thought it prudent to first secure the business against unforeseen contingencies that might arise in consequence of the unprecedented situation created by the sudden change from long years of universal peace to that of war on a colossal scale. They, therefore, decided not to add to the already large reserve fund but to carry forward a larger sum than ever before-£66,838. The Directors did not anticipate a revival of active business with the countries engaged in war to any great extent during the war. The firm had contracts booked with such countries but would be unable to execute them until after the war. Meantime their Works were fairly well employed and they had undertaken certain contracts which the Government placed with well-equipped firms.

It was a popular delusion that Government contracts were exceedingly profitable. Such contracts had to be completed under tremendous pressure, and it was the duty of contractors on patriotic grounds to make every effort, regardless of cost, to supply the Government with what they needed. And by strain and stress and all possible overtime the work had to be done to meet the demands. Another consideration which would affect the profits of most industrial concerns during the war was the indisputable fact that the cost of food had risen and might still rise to a price that would sensibly affect the workpeople of the country by seriously diminishing the purchasing value of wages. This was a grave question which employers and all concerned with industrial undertakings should meet sympathetically and patriotically with the desire to lighten the burdens of their workpeople. The working classes, being most numerous, furnished most of the fighting men. Their families would feel most acutely the pinch of excessively dear food. It was not right to ask sacrifices of them for the common weal greater than those which all other classes made according to their means. Charitable relief of the working classes was least effective and most demoralising. The greatest help that could be given to workpeople was to provide them with work at a living wage, adjusted to the cost of living frugally and carefully with self-denial and self-restraint on their part during the war. It seemed to him that company directors and shareholders should frankly face the facts affecting the people's food supply. Large dividends during war times should not be a primary consideration with them. They should first try to provide as much work as possible at wages that would enable workmen to reasonably nourish themselves and their families, having due regard to the avoidance of waste and self-indulgence. Business profits earned under the principles might be small, but shareholders ought to bear their contribution towards the relief of the universal suffering which the war had caused. Strenuous efforts should be made to keep the industries of the country alive during the war. Violent trade disputes on account of wages amounted to high treason at such a time. The War would pass all the sooner if those concerned in the industries of the country held well together, and after the war a long, lasting peace, with great prosperity, would repay them for the sacrifices they had now to make in order to secure the victory.

Japanese Rubber Planters

Japanese rubber plantations in the Malay Peninsula, says the Chugai Shogyo, have developed considerably, over 100,000 acres now being in Japanese hands. Taking the cost of plantation at Y250 per acre this would represent a total capital of Y25,000,000, but the actual amount invested is no more than Y6,000,000, on which very satisfactory returns have been made. The outbreak of war brought about some financial disturbance, with a decline in the rubber market, but the military demands have brought about a rapid recovery, and rubber is so much wanted now that its export has been prohibited in England, and the Japanese planters in Malaya are looking for capital to increase their plantations. Japanese capitalists, however, are not snatching eagerly at the bait, and it is believed that some sert of official encouragement will have to be forthcoming.

New Canadian Steamship Co.

The Canadian Pacific Ocean Services, Ltd., has been registered with a nominal capital of £2,000,000 in £10 shares. The objects are: To design, lay out, build, purchase, charter, sub-charter, lease, hire, take in exchange or otherwise acquire, hold, own, improve, maintain, operate, let out on hire, by charter or otherwise, sell or dispose of ships, tugs, barges, scows, vessels, tenders, lighters and craft of every description, whether propelled by sails or by steam or other power, to employ the company's vessels in conveyance of passengers, mails, troops, munitions of war, freight, live and dead stock, coal, minerals, treasure, produce and goods and merchandise of every kind, to acquire any postal or other subsidies, to enter into mail and other contracts, to carry on the business of ship and loading brokers, managers of shipping property, shipchandler, tourists, forwarding and general agents, etc. The first directors (to number not less than three nor more than seven) are: Isaac G. Ogden, 157 MacKay Street, Montreal, vice-president of C.P.R.; George M. Bosworth, the Lenton, Sherbrook Street, Montreal, vicepresident of C. P. R.; Edward W. Beatty, 222 Sherbrook Street West, Montreal, vice-president of C. P. R.; Frederick E. Meredith, K.C. 183 Mansfield Street, Montreal; David McNicoll, 2 Forden Avenue, West Mount, Quebec, railway official; H. Maitland Kersey, 8 Waterloo Place, S.W., manager-in-chief Ocean Services, C. P. R., and Sir Thomas Skinner, Bart., Gresham House, E.C., director of C. P. R. directors' qualification, 100 shares; remuneration as fixed by the company.

Japanese to Start Bank in China

The headquarters of the Japanese army at Tsingtau has given sanction to the application from the Tokyo businessmen for the establishment of a bank in Tsingtau with a capital of 5,000,000 taels. The bank, it is said, will be called the Japan-China Bank.

ENGINEERING, FINANCIAL AND INDUSTRIAL NEWS

RAILWAYS AND SHIPPING

Chefoo-Weihsien Railway-A telegram from Chefoo to the Japanese press states that the Chinese Government has given permission for the proposed construction of the Chefoo-Weihsien Railway as a semi-Government enterprise, allowing private capitalists to invest therein, instead of as a purely Government venture. The Chinese Guild in Chefoo is holding conferences of its leading members.

Gift to Shareholders—The directors of the Nippon Yusen Kaisha have decided to double the company's capital of 22,000,000 yen by letting the present shareholders of the company take up all the new shares, one new share for each old one. The first instalment of each share, or 12.50 yen, is to be paid out of the reserve fund.

The directors also decided to pay each shareholder 6.50 yen in cash per share as a gift on the thirtieth anniversary of the establishment of the company. This cash distribution is strongly opposed by the authorities who declare that they will not sanction it. Minister of Communications Taketomi is reported to be denouncing the distribution of cash. He even declares that if the authorities of the Company in face of his opposition dare to adopt the plan, he will decrease the state subsidy.

O. S. K. Prosperous-The Osaka Shosen Kaisha has been doing a tremendous business since the beginning of war, and the profit for the first half of 1915 shows an increase of more than half a million yen over the same term of 1914. A meeting of the directors will be held to consider whether the surplus be put on reserve or be used as a dividend. Should the dividend be declared, the dividends of the company for this term will be 15 per cent.

Chosen Line Extends—The Chosen Yusen Kaisha has decided to extend its service between Fusan and Vladivostok to Nagasaki and Moji to provide facilities for trade with Siberia.

For Russian-U. S. Service-A Russian-American Conference will be called at Vladivostok soon to solve the old problems regarding the opening of a service between that port and America and to form an alliance on the matter of rebates.

Vladivostok is the only port Russia has in the Far East for the import of her war materials and since import across the Atlantic has now been rendered very difficult, this Far Eastern port has proved a very important feeder of the Russian army. Since the beginning of the war, the number of ships calling at this port has remarkably increased and at present a greater number of ships in port can scarcely be put alongside the quay. In consequence discharging work on the piers is greatly delayed. Besides four Japanese steamers with war materials from America, and two with rice from Rangoon, there were also several British and American ships busily engaged in discharging cargo, as well as the whole of the Russian Volunteer Fleet at work in the importation of war goods. Owing to lack of laborers the authorities have removed the restriction for the emigration of Chinese.

New N. Y. K. Steamers-The Nippon Yusen Kaisha will build six vessels of 7,500 tons and

three of 3,200 tons the coming year. Orders for five have already been placed with the Mitsubishi Shipyard, to be completed in May, August and October of 1916. The order for the other four was placed with the Kawasaki Shipyard.

Japan Adds Battleship.—The Yamashiro, a new battleship which is now under construction at Yokosuka, will be launched in November, just before the Imperial Coronation.

The construction of the eight torpedo boat destroyers the appropriation for which passed the Imperial Diet in the recent session, has already been started at the Naval Docks at Yokosuka, Kure, Maezuru and Saseho, the Kawasaki Dock at Kobe, and the Mitsu Bishi Dock at Nagasaki respectively. As all the necessary materials are in hand the construction of these eight ships is to be completed by April next.

Tsingtau Fairways Clear.—Notice has been given that all submarine mines having been removed, the marine fairways to the port of Tsingtau are cleared of danger. However, navigation in the water-areas within three miles north and six miles west of Takungtao Island and 1.5 miles off Chufeng Island is strictly prohibited. Vessels drawing under 25ft. are now admissible to Main Harbour.

Chesoo and Amoy Tonnage.—The number and tonnage of ocean steamers entered at Foochow during the quarter ended December 31, 1914, was 125 ships of 125,346 tons, an increase of five ships, but a decrease of 7,855 tons from the same quarter of 1913. Of the total. British ships were 47.6 per cent, Japanese, 32.9, and Chinese, 18.2.

At Amoy there was a decrease of thirteen ships and 28,998 tons from the previous year, the totals being 200 ships of 251,728 tons of which 56.6 per cent. were British, 27.7 per cent. Japanese, 9.4 per cent. Chinese and 6.2 per cent Dutch.

Chinkiang Tonnage.—The total number and tonnage of ocean steamers entered at Chinkiang during the quarter ended December 31, 1914, was 26 ships of 34,652 tons, an increase of 5 ships but a decrease of 2,604 tons over the same quarter of the year before. The number of river steamers entered during the same time was 249 ships of 431,200 tons, an increase of 14 ships and 13,000 tons, over the same quarter of 1913. Of the total ocean steamers entered 61.9 per cent. were British, 15.2 Norwegian and the same percentage Chinese. Of the river steamers 50.8 per cent. were British, 26.3 per cent. Japanese and 22.2 per cent Chinese.

Penang Harbour Board.—The report of the Penang Harbour Board for the half-year ended December 31, 1914, shows a credit balance of \$23,220. But after paying interest due to Government, amounting to \$50,055, a debit balance of \$26,826 is shown, and after deducting \$18,828 brought forward from last year some \$7,997 excess of expenditure results. The total expenditure on new works from July, 1913, to December, 1914, was \$110,620. The tonnage of vessels using Swettenham Pier during the half year was 203,901, as compared with 340,348 during a corresponding

period in 1913. The Board now has 98 wooden and 5 steel lighters with a tonnage capacity of 6,690 tons. During the half year 39 vessels were docked for painting and repairs, the tonnage being 37,017 tons as compared with 31 vessels and a tonnage of 29,935 for the previous half year.

M. B. K. New Shipping Base,-The Mitsui Bussan Kaisha Company, it is stated, has definitely decided to establish a shipping base in one of the ports of the Gulf of Mexico. The location of the base has not yet been fixed but the company is considering the erection of extensive warehouses in Galveston for storing cotton for shipment, although it is also said that New Orleans is being considered.

The directors of the Pacific Mail Steamship company, are seriously debating the advisability of severing all ties with the railroad interests now connected with the steamship company. A decision in favor of the move, would permit the company to divert its vessels from the Pacific trade to the Panama Canal trade between the east and west coasts of the United States. Under the Panama Canal act, steamship lines owned or affiliated with transcontinental railroads are not permitted to use the canal, for coast to coast trade.

FINANCIAL

Hongkong's Circulation. - The returns of the average amount of Bank Notes in circulation and of specie in reserve in Hongkong as certified by the Managers of the respective Banks, are as follows:—

> Average Specie Banks. amount. in reserve.

Chartered Bank of India, Australia and China .. \$6,759,158 \$5,000,000* Hongkong and Shanghai

Mercantile Bank of India, Ltd 1,317,441 800,000†

Banking Corporation.. 22,675,064 17,500,000

Total .. .\$30,751,663 23,300,000

* Sterling Securities deposited with the Crown Agents valued at \$1,850,000.

† Securities with the Crown Agents £68,040.

China Paying Railway Loan,-The Ministry of Communications has paid into the Hongkong and Shanghai Bank and the Banque de l'Indo-Chine a sum of about \$1,400,000 for payment of the half-yearly interest-coupons in respect of the Anglo-French Loan for the Redemption of the Peking-Hankow Railway of 1908.

Russian Bank for Mongolia.—The following is a translation from the Commercial and Industrial Magazine issued by the Financial Department of Russia:-

The application made by the Syndicate organized with the Commercial Bank of Siberia as its nucleus, in regard to the establishment of the National Bank of Mongolia has been sanctioned by the Minister of Finance. The capital is one million roubles and the Mongolian Government can purchase it after 50 years

14,741,834

from its organization. The main office will be at Petroglad, and branches will be open at Kulun, Uliassutai and Kobdo. The Mongolian Government is entitled to receive 15 per cent

of its net profits.

The Mongolian Bank will be the only organ of monetary circulation, lack of which was mainly responsible for the hinderance of commercial development between Russia and Mongolia. Now that the amount of Russo-Mongolian trade reaches many tens of million roubles it has become impossible to get along without a bank, the fact being unanimously attested by Russian officials, consulates, merchants in the neighboring territory, as well as the Mongolians themselves. At the meetings held at Irkutsk and Petroglad in 1913, the necessity of establishing a Mongolia Bank was likewise pointed out. When the newly established bank came to open its doors an important question was to fix suitable regulations regarding loans. In this respect, Art. 6 contained in the exequatur issued by the Mongolian Government provides as follows:-

"Should it be desired that the National Treasury of Mongolia is held responsible for loans made by the bank, no loans should be made to Lamas, Hans, Princes or any Mongo-

lians whosover."

Anglo-Japanese Bank.—Rather more than a year ago the Commercial Bank of London, originally the Anglo-Japanese Bank, underwent a reconstruction, says the Financial Times, that involved a writing down of the paid up value of the shares from £5 to £3. It was then intimated that the Company's lapanese connection, which was being run at a loss, had been severed, but that other business remained which it was hoped would enable dividends to be paid on the reduced capital. According to a report just to hand, covering the period from 3rd March, 1914, to 31st March. 1915, business up to the end of July was proceeding satisfactorily, but the suddenness of the outbreak of the war rendered it necessary to realise certain investments at a loss, which has been provided for. The gross profit for the year amounted to £8,007, and, after deducting expenses and income-tax, the net receipts were only £2,357, of which £1,285 has been applied to the extinguishing of the preliminary expenses and £1,072 is being carried forward. The total of the balancesheet is £537,700. On the assets side the largest item is £352,400, representing investments which are taken "at cost." On the other side there are loans against bills receiv= able and investments figuring £,337,000, while the current and fixed deposit accounts amount only to £11,900. The Company's cash holding is restricted to £22,600.

Wants Loan of 2,500,000 Yen.—The Ensuiko Sugar Refining Co. is reported to have a plan to issue a loan of 2,500,000 yen. The question will be submitted, it is said, to consideration at the coming general meeting of the company's shareholders. The money is to be spent for the redemption of the existing loan of the company to the same value.

Borrows to Pay Loan.—The Tokyo Electric Light Company will repay the loan from Messrs. Sale & Frazar, to the extent of £300,000, which will mature on July 6, in cash out of funds to be raised in the domestic market.

Shanghai Fund Nears Million.—The Chinese Salvation Fund for national defense prospered during the June Dragon Festival. The merchants and all the public bodies and trade guilds contributed their feasting money towards it. The Shanghai fund now amounts to little below a million dollars. There is every hope that the pledged amount—\$5,000,000—will

be reached. The total hoped for from the whole country is \$50,000,000. At present almost every important city has a branch. The Japan-China negotiations have greatly strengthened the Chinese national unity. The name "national goods" has come into wide popularity. During even the short period that has elapsed, Chinese industries have received great development.

China's Foreign Debts.—With the exception of railway loans to be redeemed by the Department of Communications, the total of foreign loans and indemnity to be repaid by the Chinese Government during the current year amounts to \$85,516,035. The details are as follows:—

Kusa Loan		\$ 785.037
Arnhold, Karberg	Lean	785,037
Franco-Russian	22	9,203,348
Anglo-French	22	10,636,471
Anglo-German		00 6-6
Supplementary	93	9,188,696
Krupp	2.9	2,750,000
Political	19	13,750,000
Boxer Indemnity	21	38,417,445

Estimate of China's Revenue.—The principal sources from which the Republican Government expects to derive its income during the current year are

Land Tax.—Judging from the reports sent from the various provinces last year, the revenue from this source during the present year will amount to \$66,000,000, provided nothing unforeseen takes place.

Maritime Customs.—Everything points to the possibility that the Customs receipts will not go higher than \$24,000,000 this year, a shrinkage of some 3 million dollars compared with the revenue of the year previous.

Salt Gabelle.—A sum of \$65,000,000, is expected to be raised from the Salt Gabelle during the current year.

Native Customs.—The likin will enrich the National Treasury to the extent of 60-70 million dollars, an estimate that has been questioned. About 43,000,000 will be raised from government enterprises. Over \$19,200,000 are expected to be received from various new taxes.

Manchuria's Trade.—A British Consular report on Manchuria says that the quality of British articles is often unnecessarily high for market. The first essential is cheapness, and a lower grade of merchandise will meet the requirements of the purchaser equally well. Commercial travellers who make a round of the retail establishments once or twice a year will find plenty of business. They should be prepared to put up goods in small lots. The majority of Japanese shops appear to buy their goods in Japan. In some cases such merchandise may come from a bonded warehouse, but the terms of payment allowed by German merchants will often induce Japanese shopkeepers to buy goods which have already paid Japanese import duty. British manufacturers sending their goods to the Japanese market would be wise to have their trade marks registered in Tokio. Generally speaking, most of the business at Tairen is done on a c.i.f. basis, the vendor drawing on the buyer at 90 days sight. Some business is done on a f.o.b. basis. Much business, however, is done on other conditions, principally cash against documents, which is usually interpreted by the buyer as cash on receipt of goods.

Customs duties from the five principal ports of the Philippine Islands show an increase for May over last year of P.22,700.33. While Manila has a decrease of P.19,688 and Jolo and Zamboanga show a decrease of P5,556 and P.10,369 respectively, Cebu and Iloilo record an

increase of P.23,517 and P.34,888 making a total of P.58,405 against P.35,615, the total decrease in the collections at the other three ports. In addition to the total sum of P.1,038,675 collected in customs duties at the five ports last month, the bureau of customs collected P.116,723 in internal revenue taxes on imported goods.

April returns show an increase of P.2,396,786 in exports and a decrease of P.1,973,082 in imports while total foreign trade of the Philippine Islands shows a net increase of P.423,704 for April, 1915, over the same period last year. The exports exceeded the imports by P.3,647,906 with the following comparative totals:

				April, 1915	April, 1914
Imports	***	***	***	P.5,759,316	P.7,734,398
Exports	***		***	9,406,222	7,009,436

... ... 15,165,538

The principal items of increase in the export column are copra and hemp. In quantity, the increase in the exports of copra over April of last year amounts to 4,201,745 kilos, from 4,786,951 in April, 1914 to 8,988,696 in April, 1915, and in value P.557,006, from P.1,039,436 to P.1,596,442. Cocoanut oil exports show an increase of 492,244 kilos, from 722,544 to 1,214,788. The increase in value is from P.303,130 to P.355,296.

Hemp exports increased from 7,669,415 kilos during April of last year to 14,737,637 last month. In value the increase is from P.2,592,-238 to P.4,455,906.

Sugar shows a decrease in quantity exported from 22,117,912 to 16,161,795, but the higher prices prevailing this year have resulted in more value received despite the decrease in quantity, the increase being from P.1,885,104 to P.1,908,898. Cigars fell off from 14,045,382 to 11,151,735 and cigarettes from 5,432,407 to 4,113,603, while other tobacco exports increased slightly. In the import column the heaviest falling off is in iron and steel products, the decrease being from P.1,308,392 to P.366,626, or P.941,766. Rice imports show an increase from P.416,232 to P.921,492, or P.505,260.

MINES, MINING AND METAL MARKETS

New York's Hurry in Zinc.—Interest is almost entirely centred in the great rise in spelter prices and the far-reaching effects of its scarcity. Nearby deliveries of prime Western bring 20 to 22c, gold, and premiums are willingly paid for future deliveries. Never before have the producers been sold up so thoroughly, or so far ahead. Much talk is heard of finding substitutes for spelter. A wild scramble to buy spelter has sent prices up with a rush to levels which exceed the price of electrolytic copper, which, needless to say, breaks all records. Prompt metal is now quoted at 21 to 22c. Ordinary differentials between positions, and prices, East and West, have been more or less disregarded in the haste to buy. Forward deliveries as well as nearby shipments are commanding premiums, and little is to be had at the high prices. Business has been done into next year. Never before have the producers and sellers been in such a tight position. There is talk not only of substitutes for spelter, but for the products into which it enters. Black sheets coated with tin and lead are cheaper to-day than galvanized sheets, while painted sheets are a common substitute. If the present trend continues it is believed that recourse will be had to copper sheets for purposes where the price has heretofore been prohibitive. As for sheet-zinc, aluminum sheets can now be sold at a lower price. The base price of sheet-zinc has been advanced to 22c, by one of the large interests.

U. S. Copper Lower.—The market has been neglected by both domestic and European buyers. The lack of demand has developed pressure to sell on the part of second-hands. They have quoted down to 18.50c, gold and there have been reports that still less would be accepted. The producers, most of whom have been holding to 19c., 30 days, delivered, now show a tendency to make concessions.

Scramble for Lead.—The surprise of the week ending June 1 were three advances of \$2 per ton, or 30c. per 100 lb., making the quotation 4.50c. Up to that time the lead market had been quiet. The first advance of \$2 on May 26, stimulated buying, and on May 27, there was another advance announced by the large interest, also of \$2 per ton, making the New York quotation 4.40c. per pound. On May 28 there was a further advance to 4.50c. New York. Subsequent to the last two advances the independents advanced their St. Louis price to 4.32½c., then to 4.42½c. Exports have been good.

Tin Market Quiet.—The market has been almost uniformly quiet, heavy arrivals have put a quietus on all fears of a shortage for the time being. The trend of the market has been steadily downward. There have been days of good buying, but the quiet ones were more frequent. The quotation was 37.5 to 38 cents.

Antimony Market Quiet.—The situation is not changed with regard to English brands. They are unobtainable and therefore not quoted. Chinese and Japanese are quoted at 35 to 38c. Owners of deposits of antimony ore are seeking financial backers; but it is a question how successful they will be in view of the fact that the present abnormal condition will pass with the end of the War.

Aluminum Sheet Scarce.—Buyers are casting about, but with poor success, to buy sheet aluminum through other than the ordinary channels. Sheets are nominal at 31 to 32c. The metal is scarce and prices have advanced from 25.50 or 26c for 98 to 99% purity.

New South Wales Gold.—Official returns prepared at Sydney show the yield of gold for New South Wales to have been 124,507 ounces fine, valued at \$2,573,760, in 1914, as compared with 149,657 ounces, valued at \$3,093,648, in 1913.

TRADE RETURNS

Straits Trade.—During the fourth quarter of 1914 the total value of imports into the Straits Settlements was \$90,391,137, against \$118,903.254 in the last quarter of 1913. The totals follow:

Singapore, \$66,693,980 agst. \$78,873,716.
Penang, \$21,143,282 agst. \$37,702,946.
Malacca, \$2,554,875 agst. \$2,326,592.
Malacca was the only Settlement to show an increase.

The total value of exports for the same period was \$85,702,222 against \$92,288,887. The totals for the various Settlements were as follows:

Singapore \$61,144,733 agst. \$60,466,436.
Penang \$19,823,221 agst. \$28,743,373.
Malacca \$4,374,268 agst. \$3,078,078.
Singapore showed a slight increase whilst
Malacca exports grew thirty per cent.

Considered as a whole, the decrease in trade volume can hardly be taken pessimistically considering not only the stoppage of many

large firms but also the difficulties of delivery and the heavy brake put upon trade by freight charges; as a matter of fact the import and export of Para rubber has by itself gone far to make the figures favourable. In 1913 the imports were 35,535 piculs, in 1914 they rose to 81,583 and though values were comparatively lower the total value was nearly double.

Trade of Selangor.—The result of the war on trade generally is well illustrated by the following table:—

10110	WILLS 19	mie:-				
			Imports.			
			1914.	1913.		
	uarter	4 m 2	\$9,971,173	\$ 9,681,237		
2nd	2.9		9,341,650	9,955,745		
3rd	17	***	8,106,787	10,754,705		
4th	92	***	6,958,461	10,794,454		
To	tal Sel	angor	34,378,011	41,186,141		
			LX	ports.		
			1014.	1913.		
	narter		\$11,692,304	\$17,189,703		
2nd	33		10,545,127	13,117,955		
3rd	22	***	10,035,862	14,157,043		
4th	22	***	12,652,024	11,647,137		
To	tal Sel	angor	44,925,317	55,111,838		
			Commanded and Co			

The export figures appear to have been little influenced. With tin at a much lower price than the previous year, the first quarter's exports amounted to only 11 millions, as against 17 in 1913. The second and third quarters dropped to 10 millions each (as against 13 in 1913), so that evidently the outbreak of war has had not quite the depressing influence anticipated. With tin rising towards the end of the year the last quarter closed with an export of 12½ millions, actually one million more than during the corresponding quarter of 1913.

Japan's Foreign Trade.—The Department of Agriculture and Commerce has announced the returns of foreign trade of Japan during the first three months of 1915. The returns show a remarkable decrease. The total amount of exports in three months was yen 140,371,000, a decrease of yen 13,512,000 compared with those of the corresponding period of last year, while the imports were yen 127,636,000, also a decrease of yen 71,198,000, from the previous year. The monthly returns follow:—

Jan	49,008,000	Imports Yen 40,950,000 40,583,000 46,103,000
Total	140,371,000	127,636,000

The foreign trade of Japan for the second ten days of June was 18,936,000 yen exports and 17,311,000 yen imports, with a balance of 1,625,000 yen in favor of exports. Compared with the returns for the previous ten days, the value of exports has increased by 24 per cent, principally in copper, raw silk, tea, hats, braids, etc. Imports have increased by 43 per cent., raw cotton, iron and oil cake, accounting for most of the increase. The figures since January 1, 1915 are 281,583,000 yen of exports and 275,507,000 yen of imports, with an excess of 6,076,000 yen of exports.

Shanghai's Trade.—Like other parts of China, Shanghai has suffered considerably as the result of the war in the imports of iron and machinery, says the Shanghai Times. The total value of machinery imported during the quarter ended December 31, 1914, was only Tls. 47,394 as compared with Tls. 110,601 in the same quarter of the preceding year. The quantity of old iron imported fell from 23,997 piculs in the quarter ended December, 1913, to 12,051 in the same quarter of last year, though the importation of angles and bars shows an increase, being 12,577 piculs last year against

8,338 piculs in the same quarter of the year before. The import of electrical materials, lamps and lampware, decreased from Tls. 10,427 in the last quarter of 1913 to Tls. 6,893 last year, while galvanised iron sheets fell from 14,686 piculs in 1913 to 8,533 piculs last year.

Mongolia Trade Poor — According to the statement of a Russian merchant having recently returned from Mongolia, Russian trade at Kulun is in a decidedly poor state, a slight advance in price of commodities produced in Russia as the result of the depreciation of roubles being responsible for the decrease of patronage. The depression is even noticed at Maimaicheng, where Russian trade fell off 20 to 30 per cent during last year. Since the development of trade of other countries in Mongolia means the waning of Russian influence, he thinks they must do everything to re-establish and maintain good commercial relations with the natives.

He points out the fact that a large quantity of American goods are now imported to Mongolia. Among the sheeting, an article having the largest demand among the natives, most is of American origin. This is imported to China, where it is dyed and then shipped to Mongolia. The method of dyeing being far superior to that practiced among the Russians,

the article is favorably received.

Trade at Tsingtao.—Things are slowly but steadily improving at Tsingtao with regard to trade. Cotton cloth and yarn, matches, timber, and marine products, are the chief imports, and raw cotton. groundnuts, straw plaits, cattle and hides, the principal exports. There is no coal to spare for export.

The Customs returns from Dec. 28th to Jan.

31st were: Imports ... S.Y. 664,861 Exports 110,861 Re-exports ... 79,287 During February they were: Imports S. Y. 980,775 Exports ... 313,113 Re-exports ... 90,202 The valuation is in Japanese war notes. The returns for April and May follow:-

		E.z.		2	
		Ap	ril		Tis.
Aggregate		unt	***	1	,489,317
Imports		* * *		* * *	951,883
Exports		***	* * *		302,707
Re-expor	rts	***	***		234,726
		M	ay		
Aggregate		unt			,465,188
Imports		***	(#/#.#F	***	835,958
Exports			***		375.275
Re-expor	rts	***		***	235,945

Tea Trade with America.—The shipment of tea from Yokohama to Canada and America during the first three months of this year was: January, 364,040 pounds; February, 141,465; March, 134,181.

AGRICULTURE

Sericulture in Korea.—According to a report quoted by the Seoul Press the area planted with mulberry trees is steadily increasing in Korea. Investigations made in December, showed 2,928,2 cho of land entirely devoted to the cultivation of mulberry trees and 7,318 cho partly planted with them, making a total of 10,246,2 cho, an increase of 37 per cent over the preceding year. Compared with 1910, this shows an increase of 6,900 cho with a product of 32,000 koku of cocoons more than in that year. The total quantity of cocoons obtained last year was 46,000 koku. The ratio of 0.6 koku of cocoons to one tan of land is far from being satisfactory compared with the ratio of one koku per tan in Japan.

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Wireless Telegraph Apparatus

Wire Nails U. S. Steel Products Co.

Wire Rope and Cables Bohler Bros. & Co., Ltd. U. S. Steel Products Co.

Wood Working Machinery American Tool Works Co. Defiance Machine Works Shanghai Dock & Engineering Co., Ltd.

Wrenches

Trimont Mfg. Co.